

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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No. 2098.—VOL. XLV.

LONDON, SATURDAY, NOVEMBER 6, 1875.

[WITH SUPPLEMENT.] {PRICE SIXPENCE.
PER ANNUM, BY POST, £1 4s.

MR. JAMES H. CROFTS, STOCK AND SHARE BROKER,
NO. 1, FINCH LANE, CORNHILL, LONDON, E.C.
Established 1842.

BUSINESS transacted in all descriptions of MINING Stocks and Shares (British and Foreign), Consols, Banks, Bonds (Foreign and Colonial), Railways, Miscellaneous, Insurance, Assurance, Telegraph, Shipping, Canal, Gas, Water, and Dock Shares.

BUSINESS negotiated in Stocks and Shares not having a general market value. BUSINESS in all COLLIERY and IRON Shares, and in the principal WAGON and MANUFACTURING COMPANIES of the NORTH of ENGLAND and SCOTLAND.

Mr. J. H. CROFTS, having now established CORRESPONDING AGENCIES in all the CHIEF TOWNS of the United Kingdom, is prepared to deal in the various LOCAL STOCKS and SHARES at close market prices.

COTTON SPINNING SHARES Bought and Sold, including those of Oldham, Bury, Heywood, Darwen, Accrington, and neighbouring districts. This description of security can be purchased to pay the investor very fair interest upon outlay.

Accounts opened for the Fortnightly Settlement.

Monthly and Daily Price Lists issued.

Bankers: City Bank, London; South Cornwall Bank, St. Austell.

SPECIAL DEALINGS in the following, or part:—50 Asheton, 16s. 3d.; 20 Bampfylde, 18s.; 20 Bog, 7s. 6d.; 10 Bilson, £10; 50 Cardiff and Swansea, £2; 5 Cathedral, 20s. 9d.; 15 Colorado, 22s. 3d.; 40 Chapel House, 24s. 9d.; 10 Cape Copper, £25; 10 Chelmsford, 28s. 6d.; 20 Emma, 22s. 3d.; 15 East Caradon, 21s. 9d.; 20 Exchequer, 11s. 9d.; 30 Flagstaff, 10s. 3d.; 10 Gt. Laxey, £16 1/2%; 30 Hingston, 21s.; 50 Javali, 10 Last Chance, 22s.; 5 Ladywell, 28s.; 50 Mawdryn Iron, 21s. 6d.; 30 Marke Valley, 23s. 6d.; 80 Prince of Wales, 4s.; 50 Parys Mountain, 12s. 3d.; 10 Pateley Bridge, 28s.; 30 Pennerley, 200 Penrhyn, 11s. 3d.; 100 Plymlimmon, 7s.; 10 Providence, 23s.; 20 Richmond, 20 17s. 6d.; 10 Roman Gravels, 21s. 7s. 6d.; 20 South Cadwra, 26s.; 25 Sweetland, 22s.; 10 Tankerville, £10 1/2%; 20 Thorp Gawber, 10 Van, 22s.; 20 Van Consols, 3s.; 5 West Chiverton, 21s.; 20 West Tankerville, £15.

BUYER OF POSITIVE ASSURANCE Shares.

* * Shares sold for forward delivery (one or two months) on deposit of 20 per cent.

Business on hand in all the leading TIN, COPPER, and LEAD Shares.

EGYPTIAN AND TURKISH BONDS.—SPECIAL BUSINESS
nd latest information
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

RAILWAYS.—SPECIAL BUSINESS. Fortnightly accounts
opened on receipt of the usual cover.
JAMES H. CROFTS, 1 FINCH LANE, LONDON.

BLACK ROCK COAL.—SPECIAL BUSINESS.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

MR. W. H. BUMPUS, STOCK AND SHARE BROKER,
44, THREADNEEDLE STREET, LONDON, E.C.,
Transacts business in MINING and COLLIERY Shares of every description.
English and Foreign Stocks, Colonial Government Bonds, Railways, Banks, and
Miscellaneous Shares, and all Securities dealt in on the London Stock Exchange,
for INVESTMENT or SPECULATION.

Purchases and Sales negotiated in Unmarketable Stocks and Shares.
Speculative Accounts opened for the Fortnightly Settlement.
References given and required when necessary.

A Stock and Share List forwarded to bona fide Investors free on application.

Bankers: The National Provincial Bank of England, E.C.

SPECIAL BUSINESS in the undermentioned, at close market prices:—
Asheton. Emma (Silver). Roman Gravels.
Bog. Flagstaff. Richmond.
Birdseye Creek. Frontine. South Condurrow.
Carn Brea. Gold Run. Sweetland Creek.
Cape Copper. Javali. St. Patrick.
Cathedral (Copper). Ladywell. Tankerville.
Chapel House Colliery. Marie Valley. Tincroft.
Chicago (Silver). Pennerley. Van.
Dolcoath. Parys Mountain. Van Consols.
Don Pedro. Penrhyn. West Chiverton.
Devon Consols. Pateley Bridge. West Tankerville.
Eberhardt. Port Phillip. Wheal Uynn.

FOR SALE, at prices annexed:—
50 Chapel House, £2 1s. 10 Grenville, 23s. 100 Plymlimmon, 7s.
36 Colorado, 42s. 50 Last Chance, 11s. 6d. 100 Rookhope, 3s. 6d.

IMPORTANT.—Intending investors should lose no time in securing shares in well-selected mines at the low quotations now ruling, as an early and substantial advance may be confidently relied upon. Provided proper discrimination is exercised in the selection, there are, at present few, if any, other securities in the market which offer such a favourable field for investors, and considering the extremely low prices of the majority of shares in sound dividend and progressive mines, anyone investing now has the advantage of a minimum of risk, and will in all probability be enabled to realise handsome profits within a short period.

W. H. B. will be happy to furnish, on application, a list of shares which are likely to have an early rise in market value.

WILLIAM HENRY BUMPUS, SWORN BROKER.

OFFICES—44, THREADNEEDLE STREET, LONDON, E.C.

MESSRS. PYNE AND ASHMEAD,
CITY MINING AGENTS,
LONDON MANAGEMENT OF COMPANIES UNDERTAKEN.
ACCOUNTS AUDITED, LIQUIDATIONS CONDUCTED.
6, BISHOPSGATE STREET WITHOUT, LONDON, E.C.

FERDINAND R. KIRK, STOCKBROKER,
5, BIRCHIN LANE, E.C.
SPECIAL BUSINESS in:
Altami Colliery. Eberhardt. Anglo-Cable.
Chapel House. Cardiff and Swansea. Direct Cable.
Cape Copper. Richmond. Law's Chemical.

Consols, Foreign Bonds, Railways, and every security quoted on 'Change bought and sold. Clients giving the usual "cover" can open accounts for the fortnightly settlement. References given when necessary in most of the leading towns of the United Kingdom.

JOHN RISLEY (SWORN), STOCK AND SHARE BROKER,
77, CORNHILL, LONDON.

Business transacted at the following rates of commission:—Foreign Stocks, 1/4 per cent.; and Mining Shares of £1 each and upwards, 1/4 per cent.; under £1, 1/4 per share.

MESSRS. W. J. TALLENTIRE AND CO.,
STOCK AND SHARE BROKERS,
20, CHANGE ALLEY, CORNHILL, LONDON, E.C.

Transact business in Stock Exchange Securities and Mining Shares of every description, either for immediate cash or the usual bi-monthly settlements, and also afford advice personally or by letter to executors, trustees, capitalists, and investors of every class in the selection of Securities for safe and profitable investment, their experience of the markets, extending over a period of more than sixteen years, together with special facilities for acquiring information, enabling them to act beneficially for clients.

They have established Corresponding Agencies in all the principal towns of the United Kingdom, and are prepared to deal in the various local Stocks and Shares at close prices. Orders per post or telegraph receive prompt attention.

EVERY INVESTOR should read the October number of Messrs. W. J. TALLENTIRE AND CO.'s Circular, which will be sent post free on application.

MMR. W. MARLBOROUGH, STOCK AND SHARE DEALER,
29, BISHOPSGATE STREET, LONDON, E.C. (Established 19 Years),
can sell the following SHARES, at prices annexed:—

50 Asheton, 18s. 9d. 50 Prince of Wales, 2s 9d.
60 Bog, 7s. 2d. 55 Gunnislake, 42s. 6d. 50 Pennerley, 5s.
25 Birdseye, 21s. 50 Gold Run, 17s. 65 Penrhyn, 11s. 3d.
50 Cathedral, 26s. 50 Hingston, 18s. 9d. 50 Parys Mountain, 6s. 9d.
60 Chontales, 10s. 75 Javali, 11s. ed. 50 Port Phillip, 16s.
20 Chapel House, 24 3s 9 30 Ladywell, £2 11s. 3d. 20 Richmond, 26s.
30 Colorado, £25. 50 Last Chance, 18s. 9d. 25 Russia Copper, 23s.
75 Don Pedro, 12s. 20 Marke Valley, 23s. 40 Sweetland, 23s.
25 East Caradon, 32s. 9d. 25 N. Quebrada, 43s. 100 South Aurora, 7s. 9d.
50 Emma, 51s. 70 Old Treburett, 7s. 80 St. Patrick, 27s. 6d.
60 Exchequer Gold, 42s. 60 Parys Mount, 12s. 40 Van Consols, £1 13s. 9
20 Eberhardt, 28s. 20 Pateley Bridge, 28s. 100 West Maria, c.p., 7s. 9
40 Flagstaff, 16s. 3d. An Offer Wanted for 100 Minini Association.

LEAD MINES INVESTMENT.—
BUYER and SELLER of SHARES at MARKET PRICES, with advice
as to PURCHASES and SALES, and information as to
FUTURE PROSPECTS, &c.

P. WATSON, 79, OLD BROAD STREET, LONDON, E.C.

INVESTMENTS IN STOCKS AND SHARES.—
BRITISH and FOREIGN STOCKS and SHARES BOUGHT and SOLD.
List of Prices and other information sent on application.

Bankers: The Alliance Bank (Limited), London.

MR. P. WATSON, 79, OLD BROAD STREET, LONDON, E.C.

(Close to Stock Exchange.)

FINANCIAL OPERATIONS NEGOTIATED.

MMR. ALFRED E. COOKE, STOCK AND SHARE DEALER,
76, OLD BROAD STREET, LONDON.
(Established 1853.)

Mr. COOKE is a BUYER and SELLER of the following SHARES at closest possible market price, free of commission:—

Bampfylde. Pateley Bridge. Tankerville.
Chapel House. Positive Assurance. Tinckroft.
Devon Consols. Roman Gravels. Van.
Eberhardt. Richmond. Van Consols.
Javali. South Condurrow. West Chiverton.
Marke Valley. Tyllwyd.

SPECIAL BUSINESS in the following:—

Asheton. Cathedral. St. Patrick.
Cakemore Colliery, 25. Glaesdale. St. Patrick.
Caldbeck Fells, 8s. 6d. Monydd Gorddu, £2 1/2.

Flagstaff. 14s. 10s. Tankerville. West Maria.

Frontino. 12s. 16s. Tankerville. Wh. Kitty (St. Agnes).

Gawton. 10s. 12s. 6d. Tankerville. Wh. Kitty (St. Agnes).

Gold Run. 14s. 16s. Tankerville. Wh. Kitty (St. Agnes).

Hingston Down. 15s. 20s. Tankerville. Wh. Kitty (St. Agnes).

Javali. 12s. 14s. Tankerville. Wh. Kitty (St. Agnes).

Marke Valley. 23s. 3s. Tankerville. Wh. Kitty (St. Agnes).

New Querbrada. 32s. 33s. Tankerville. Wh. Kitty (St. Agnes).

New Rosario. 5s. 6s. Tankerville. Wh. Kitty (St. Agnes).

Parys Mountain. 11s. 13s. Tankerville. Wh. Kitty (St. Agnes).

Pennerley. 6s. 6s. 6s. 6s. Tankerville. Wh. Kitty (St. Agnes).

Penrhyn. 14s. 10s. 10s. Tankerville. Wh. Kitty (St. Agnes).

Plymlimmon. 7s. 8s. Tankerville. Wh. Kitty (St. Agnes).

Port Phillip. 14s. 16s. Tankerville. Wh. Kitty (St. Agnes).

Portsmouth. 14s. 16s. Tankerville. Wh. Kitty (St. Agnes).

Richardson. 14s. 16s. Tankerville. Wh. Kitty (St. Agnes).

Richmond. 14s. 16s. Tankerville. Wh. Kitty (St. Agnes).

South Condurrow. 14s. 16s. Tankerville. Wh. Kitty (St. Agnes).

Tinckroft. 14s. 16s. Tankerville. Wh. Kitty (St.

In consequence of the UNFOUNDED ATTACKS made on the KEOKUK AND KANSAS CITY RAILWAY by the *Times*, and their REFUSAL to ADMIT a REPLY to the same, the said REPLY has been inserted, as an Advertisement, in TWO HUNDRED London and Provincial Papers. It can also be obtained as a LEAFLET from all Agents of the CO-OPERATIVE CREDIT BANK. Special attention is drawn to this answer; and in order to give the public full time to digest it the LISTS WILL BE KEPT OPEN until FRIDAY, the 12th inst., for LONDON, and SATURDAY, the 13th inst., for the COUNTRY.

ISSUED AND STRONGLY RECOMMENDED BY THE CO-OPERATIVE CREDIT BANK.

Keokuk and Kansas City Railway Company of Missouri, UNITED STATES OF AMERICA.

FIRST MORTGAGE SINKING FUND BONDS.

Issue of £500,000 sterling = \$2,500,000 American Gold, being part of £1,000,000 sterling, or \$5,000,000 American Gold, authorised to be issued in accordance with the Charter and resolutions of the Board of Directors. Bearing interest at the rate of 7 per cent. per annum payable half-yearly, but yielding at the price of issue 8 per cent. annually. Interest and principal payable in London, at the Co-operative Credit Bank, in sterling, or in New York City (U.S.A.), at the office of the Farmers' Loan and Trust Company, in American Gold, free from all United States or State Taxes. The Bonds are to bearer or registered of various denominations as under, repayable at par A.D. 1905.

DENOMINATIONS OF BONDS.		
Class A, \$1000 American Gold	= £200	0 0 sterling.
Class B, \$500	"	100 0 0 "
Class C, \$250	"	50 0 0 "
Class D, \$100	"	20 0 0 "
Class E, \$25	"	5 0 0 "

PRICE OF ISSUE PER BOND.		
Class A, \$875 American Gold	= £175	0 0 sterling.
Class B, \$437·50	"	87 10 0 "
Class C, \$218·75	"	43 15 0 "
Class D, \$87·50	"	17 10 0 "
Class E, \$21·88	"	4 7 6 "

A bonus of 20 per cent. in full paid ordinary shares of the Railway Company will be allotted to subscribers after the final payment, on the issue of the Definitive Bonds.

TRUSTEES UNDER THE MORTGAGE.

FARMERS' LOAN AND TRUST COMPANY OF NEW YORK (U.S.A.).

ENGLAND.

PRESIDENT—SAMUEL H. MELVIN, Esq., Springfield, Ill.

VICE-PRESIDENT—A. C. VANDEWATER, Esq., Pana., Ill.

DIRECTORS.

SAMUEL H. MELVIN, Esq., Springfield, Ill.

HOWARD M. HOLDEN, President First National Bank, Kansas City (Missouri).

WILLIAM PATTERSON, Esq., President Keokuk National Bank, Keokuk (Iowa).

WILLIAM H. WATERS, Esq., President Second National Bank, St. Louis (Missouri).

JOHN H. CARDELL, Esq., Cashier Saline County Bank, Marshall (Missouri).

GEORGE H. REA, Esq., President Mississippi Valley Transportation Company, St. Louis (Missouri).

JOHN W. MORSE, Esq., General Agent, Indianapolis and St. Louis Railroad Company, St. Louis (Missouri).

General F. A. JONES, formerly United States Army, Macon (Missouri).

A. C. VANDEWATER, Esq., Pana. (Illinois).

GEORGE P. LAURENCE, Esq., Pana. (Illinois).

* : : Esq., England.

* : : Esq., England.

* : : Esq., England.

* To be elected by the Bondholders at a meeting to be called for that purpose after Subscription and Allotment.

SOLICITOR—CHARLES HENRY EDMANDS, Esq., 33, Poultry, London, E.C.

ENGINEER-IN-CHIEF—OSWALD YOUNGHUSBAND, Esq., M.Inst.C.E.

BANKERS—THE CO-OPERATIVE CREDIT BANK, Mansion House Chambers, 11, Queen Victoria-street, London, E.C., and all its branches throughout Great Britain and Ireland.

THE CO-OPERATIVE CREDIT BANK is authorised by the Keokuk and Kansas City Railway Company to receive subscriptions for £500,000 sterling, in bonds of various denominations, as above, said £500,000 being the first portion of an authorised issue of £1,000,000 sterling, which is now for the first time offered to the public.

The terms of payment are—

- 20 per cent. on application.
- 10 per cent. on allotment.
- 10 per cent. Dec. 1, 1875.
- 10 per cent. Jan. 3, 1876.
- 10 per cent. Feb. 1, 1876.
- 10 per cent. March 1, 1876.
- 10 per cent. April 1, 1876.
- 20 per cent. May 2, 1876.

Subscribers will have the option of pre-paying in full under discount at the rate of 6 per cent. per annum, either on allotment or on any of the dates when an instalment falls due. The failure to pay duly any instalment will subject all previous payments to forfeiture and cancellation of the allotment.

Scrap certificates will be issued against allotment letters and the bankers' receipts, and after payment of the final instalment will be exchanged for the definitive bonds in due course.

Special attention is drawn to the fact that a bonus of 20 per cent. of their holdings, in full-paid ordinary shares of the Keokuk and Kansas City Railway Company, will be allotted to subscribers on the payment of the final instalment and the issue of the definitive bonds. It is calculated that this ordinary share capital will within four years from completion of the road be earning a dividend of at least 4 per cent. annually. For subscribers to bonds of a lower denomination than £100 it has been arranged that inasmuch as the share capital cannot be subdivided, according to the charter, into a lower denomination than \$100, a new plan shall be carried out to secure for them a similar interest in the 20 per cent. bonus. This arrangement is that the balance after allotment, made to the holders of larger bonds, shall be placed in the hands of trustees; against which numbered coupon tickets will be issued in proportion to the amount of

the lower bonds, as, for instance, one to each holder of a £5 bond, four to a holder of a £20 bond, and so forth. Within one month after the final payment on such smaller bonds (*i.e.*, those below £100) a drawing will take place in the presence of a notary public for such a number of \$100 shares as will represent the proportion of said bonus of \$100 share to £100 worth of bonds held in sum under the said sum of £100, in which one coupon will have a chance of being drawn for a \$100 share.

The bonds now offered will form a first charge on a main line of road 225 miles in length, extending from Keokuk (Iowa) to Kansas City (Missouri), the latter terminus being, as is well known, the great commercial centre of the South-West. There has been expended already on the property \$1,170,239, or, in round numbers, £200,000, on the section or division between Salisbury and Kansas City (107 miles in length, exclusive of sidings); 15½ miles between Glasgow and Salisbury are already in operation, and about 20 miles more are so far advanced in respect to the earthworks and bridges that they can be completed ready for the permanent way at a very moderate outlay.

A special provision of the mortgage is that the railway company bind themselves to use their best endeavours to procure at the next session of the Legislature of Missouri such additional powers as will confer on the bondholders the right to vote at all elections equally with the shareholders. In the meantime it has been agreed that the bondholders shall have at once the nomination of three English directors, and thus be guaranteed a direct voice in the management. It will be evident to bondholders that by securing this voting power the management is practically vested in them, as having in connection with the stock bonus above mentioned a majority of votes.

An English trustee will be appointed to guard the interests of the English bondholders.

No disbursement of the money subscribed will be made either to the railway company or the contractors, except on the certificate of an engineer appointed by the bondholders that five consecutive new miles of railway are completed according to specification, and are in running order for trains, and so from time to time as every successive five miles of new railway are

completed, the contract being specific that no payment shall in any case be made except as and when every five miles are completed.

The completed and projected line of the Keokuk and Kansas City Railway has been very carefully examined by Mr. Oswald Younghusband, M.Inst.C.E. His report demonstrates that the proceeds of the bonds will be amply sufficient for the completion and full equipment of the division between Salisbury and Kansas City; that in consequence of its judicious location it can be worked at a very moderate cost; and that through opening up a richly-settled agricultural and mineral section of the State of Missouri the net receipts from the traffic will be amply sufficient on completion of the road to pay the interest on the debentures.

Provision has been made by the railway company for depositing with trustees two years' interest in advance on the bonds, so that there may be no possibility of default during the construction of the road. These trustees are two in number, and have been appointed conjointly in the interests of the bank and the railway company. Every precaution has been taken to guard against those abuses which, unfortunately, have in some cases cast discredit on American railroad investments.

The legal documents connected with the company can be seen at the office of C. H. Edmonds, Esq., solicitor, 33, Poultry, London, E.C.

Copies of the engineer's report and of the mortgage, or Deed of Trust, as settled by J. P. Benjamin, Esq., Q.C., together with prospectuses and forms of application, can be obtained at the chief office of the Co-operative Credit Bank, 11, Queen Victoria-street, London, E.C., or at its various branches throughout Great Britain and Ireland.

Subscription lists will be opened on October 30 at the Co-operative Credit Bank in London and at its various branches. These lists will be closed for London on November 8, and for the country on November 9.

Applications must be made on the following form, and must in all cases be accompanied by a deposit of 20 per cent., which will be returned without deduction should there be no allotment.

FORM OF APPLICATION.

TO BE RETAINED BY THE BANK.

ISSUE OF £500,000—\$2,500,000—PART OF £1,000,000, OR \$5,000,000, FIRST MORTGAGE SINKING FUND BONDS OF THE

KEOKUK AND KANSAS CITY RAILWAY COMPANY.

Redeemable in Thirty Years from October 1st, 1875. Principal and Interest at the rate of 7 per cent. per annum, payable in Gold.

In Bonds of A £200, B £100, C £50, D £20, E £5.

TO THE DIRECTORS OF THE KEOKUK AND KANSAS CITY RAILWAY COMPANY, LONDON, E.C.

Having paid to your credit with the CO-OPERATIVE CREDIT BANK the sum of £ _____, request that you will allot to _____, on the conditions of the Prospectus issued by you, dated October 30th, 1875, Bonds of the above-mentioned issue, Class _____, and hereby agree to accept the same or any smaller number that may be allotted to _____, and to pay the additional instalments thereon as they may become due from time to time, and in default of due payment on any instalment agree that allotment and all previous payments shall be liable to forfeiture.

Name in full
Address
Date
Signature of Applicant

ADDITION TO BE FILLED UP IF THE APPLICANT DESIRES TO PAY IN FULL.
subscription in full, discount at the rate of 6 per cent. thereon to be allowed for the intervening period.
Signature.....

RECEIPT (TO BE RETAINED BY THE APPLICANT).
for account of the Keokuk and Kansas City Railway Company, being the payment of deposit of £20 per cent. per Bond,
Bonds, Class
For the Co-operative Credit Bank..... Manager.

Received of the sum of £
Required on application for the allotment of £
£ : :
N.B.—Similar receipts will be issued to Subscribers on the payment of each instalment as it becomes due, said receipts to be exchanged as soon as possible after the final payment for the definite Bonds.

Original Correspondence.

THE CHANNEL SUBMARINE TUBULAR BRIDGE.

That advantage would result from connecting England and France by railway communication is now considered certain by a large number of persons on both sides of the Channel, although great diversity of opinion exists as to the method by which such communication should be established. A tunnel, a bridge, and a monstrosity, capable of carrying entire trains from shore to shore without uncoupling the carriages, have each their advocates, and Mr. PETER BARLOW, F.R.S. (who has had, perhaps, more experience than any man living in the construction of sub-aqueous communication, since he was the author of the Tower Subway project in connection with which he has actually made a long tunnel under the Thames from Tower Hill to Horsleydown, without letting in, as expected, a drop of the water of the Thames), now puts forward a modification of the suggestion originally made by Mr. John de la Haye, in the columns of the *Mining Journal*, for a tubular communication which in its modified form becomes a submarine tubular bridge. The position is the more worthy of consideration because Mr. Barlow no patent or company to promote, and writes only in the cause of science. He believes tunnelling under the sea to be a mistake, and this opinion will, without any doubt, be ultimately verified, though the verification may not come until it is too late for capitalists sufficiently credulous to risk their money to escape the inevitable loss which must result. The submerged tube has, moreover, the immense advantage over all the tunnelling projects that the construction of 50 or more sections of the tube can be going on simultaneously, whilst but two pairs of men could work at the same time in the tunnel; and it is this that renders the completion of the tube within a year possible.

The task of demonstrating the practicability of laying a double steel tube or tunnel, or a submarine tubular bridge, across the channel from Dover to Calais appears at first sight an extremely difficult one, yet after carefully considering Mr. Barlow's pamphlet a very different conclusion seems justifiable. He states that his attention has been recently called to the subject of completing railway communication under the sea, from having had to report upon the practicability of such a connection at the city of Rio de Janeiro, with regard to the various schemes which have been brought forward. Mr. Barlow is of opinion that they are generally practicable, if they involve so much time and cost that the capital cannot easily be found for their execution. This question of cost is of the most possible importance, and in connection with it there is one which must not be lost sight of. In all calculations of expenditure and returns which have hitherto been made it has been assumed not only that the amount of trans-Channel traffic would increase many fold if the tunnel were constructed, but likewise that a whole of the increased traffic would go by that route, although a difference in time of a journey from England to any continental port would only be shortened by one hour, and that at the expense of half-an-hour's sojourn in an atmosphere so unwholesome as to be likely to have a most prejudicial effect upon the health of those submitting to it. From the large sectional area of the Thames Tunnel as compared with its length the inconvenience of bad ventilation was not felt, but in the Tower Subway, in which the relation of sectional area to length would still be vastly greater than in the Channel Tunnel, the conditions are more nearly similar, and here ventilation is very far from good. It is, of course, well known that greater lengths of airway than 20 or 30 miles are kept fairly ventilated in many of the larger collieries, but when the airway is longer from that of a horse level to that of a railway tunnel the case is widely different, especially as in the Channel Tunnel the augmentation of the number of shafts would be altogether impracticable.

By the mode of construction which Mr. Barlow proposes, he anticipates that if his views be correct two substantial and durable walls may be laid down for much less than any of the previous estimates, and within 12 months from the time the contract is signed. The plan proposed is to make the tube of elastic iron, or plates riveted together, surrounded and protected by 2 ft. 3 in. brickwork (which, as the required deflection is but $\frac{1}{2}$ in. in 100 ft., could be conveniently used) laid in asphalt, and beyond this by 6 in. copper planking, well caulked and secured by rings of copper, or by copper cylinder. Such a tube, he remarks, would float in the water, and would require some further loading to cause it to sink and lie on the bottom. Thus, it might be constructed at shipbuilders' yards in lengths of about 300 ft., and towed to the proposed line of way. These lengths may be joined together by a floating iron dam or dry dock. The whole tunnel may be laid in a few weeks when the requisite lengths are complete, and the time required to execute a double tunnel from France to England will depend upon the rate at which the steel and other materials can be supplied; and Mr. Barlow is informed that such a supply of steel and other materials can be obtained, with continental assistance, in a year. He has, therefore, assumed one year as the time necessary to complete this work. He points out that the tunnel, being constructed of steel, is so elastic that the portion completed may be rolled and laid on the bottom of the sea while the upper part is being fitted together on the surface of the sea, but it is not necessary that it should be laid on the bottom of the sea, as it may be suspended and anchored out of reach of shipping at 25 ft. below the water, in which case the deflection of the tube will be a matter of less difficulty. When the tube is deflected from 70 ft. below high water to the surface level of the sea, the extension produced by the curve is 1-3000th of the length, and the weight required to hold the tube (if of wrought iron) on the bottom, and on the end on the level of the sea to produce the deflection is only 4 $\frac{1}{2}$ tons, the ton not exceeding 3 tons per inch. If a more elastic metal than wrought-iron is used, the weight required for bending will, of course, be less, but there are no direct experiments except as to wrought-iron from which to estimate. The dimensions and mode of laying need not be referred to; they would readily be made to suit the circumstances of the case, and would present no insuperable difficulty.

The idea of mounting the tube on piers is unquestionably bad, as it would give a merely imaginary advantage in exchange for permanent stability of the tube. All who have carefully studied the nature of the currents and undercurrents existing in the Channel, probably, admit that the stability of the whole structure can be hoped for by taking advantage of the natural forces. It has been demonstrated more than a century since that there is an enormous concentration of force in the narrow strait which separates Dover from Calais, and that the prevailing motion is from east to west, the waves having a great tendency when acting in that direction to carry all before them; it is not unreasonable, then, to suppose that even such a structure as that proposed by Mr. Barlow, if suspended in midwater be broken up like a tobacco-pipe by the very forces which in times long past created the very strait through which it is now proposed to make a dry communication.

As Mr. Barlow distinctly states that he has not yet formed any decided opinion with regard to the suspension of the tube, it will be well for him to reconsider the whole matter in connection with the question of the Channel currents, and every facility will be given to him for making known his views and conclusions through *The Mining Journal*.

As compared with the masonry tunnel the tubes proposed by Mr. Barlow have undoubted advantages, as will readily be understood from the briefest considerations of the four leading recommendations of the tubular system to which he alludes—as compared with a

masonry tunnel the depth below high water will be reduced one-half, with a corresponding improvement in gradient; the length of the tunnel will be reduced hereby one-third, the time of execution will be reduced probably to one-tenth, and the cost will be importantly reduced, but detailed calculations are not yet prepared. To this may be added that in carrying out any such projects as Mr. Barlow's the money expended would produce equivalent benefit to various branches of industry both in England and on the Continent, whilst in the case of a masonry tunnel the larger proportion of the money would be irretrievably sunk, the comparatively small advantage derived by the public falling into the hands of but few individuals, and doing little or no good to the working classes. Mr. Barlow has said enough to show that the difficulties of laying a pair of tubes across the Channel are not insuperable, and the tubular system is certainly more likely than any other system of tunnelling to prove commercially successful.

MINING NEWS OF THE WEEK.

Messrs. F. W. MANSELL and Co. (Sworn Stock and Share Brokers), Pinners Hall, Old Broad-street, write to us as follows:—

HYDRAULIC GOLD MINING.—Following the remarkshitherto made, we may now state that already chasms of 1000 ft. vertical depth are successfully crossed by high iron pipes, to convey water to isolated points. The practical test has proved that air can never collect at the lowest point of the inverted siphon, the point where the greatest pressure of water results. Uncalled for as this remark may seem, it must be excused, for the reason that men of good sense and some engineering capacity expressed fear that air would be carried down with the water to the lowest point of the pipe or siphon and collect there finally to a great extent under the pressure of two immense columns of water, and might explode at any moment as in an overcharged air-gun. This question was decided like the dispute about the weight or no weight of the fish in water, not by philosophy but by practical experiment, and the only question in the conveyance of water through pipes is that of sufficient strength of pipe to stand the pressure of the water, be the vertical height 500 or 5000 feet. Thus the field for hydraulic operations is immensely enlarged; almost all gravel deposits are accessible no matter at what elevation they are found, and the production of gold will keep pace with the development of other great industries of the country.

BLUE TENT CONSOLIDATED HYDRAULIC GOLD MINE.—It was omitted to be mentioned last week that the South Yuba claim, where the last run of 90 hours gave such large produce, is being brought into active and remunerative development by an extension of the bed-rock tunnel. This claim was originally worked through this tunnel, which was then run in 150 ft. on grade, then raised to a high angle 38 ft., and again extended 90 ft. further on an incline. The arrangements for its working are good, and have produced satisfactory results. The work now in progress will enable this claim to be continued successfully for many years. By extending the bed-rock tunnel 220 ft. in from the lower grade it will reach the face of the bank at the back of the present pit, 58 ft. below the surface of the bed-rock, thus providing an outlet for a large extent of gravel. Through this extended tunnel a large area of property can be mined to bed-rock to great advantage. There is an average fall of 60 ft. perpendicular between each flume, affording unsurpassed facilities for grinding and pulverising gravel and cement and saving gold. In one clean-up of over \$5000 only \$15 were found in the lower flume, showing how nearly all the value was saved in the sluices above. The South Yuba claim has already yielded gold to the value of \$60,000; the Gopher claim has yielded \$275,000; the Darst, \$160,000; the Enterprise, \$175,000; the Empire, \$50,000; and the Blue Lead and Bed-Rock claims, \$50,000. The total gross yield from the company's claims have been up to the present time \$770,000. The expenses are estimated at one-fourth of the gross returns. To obtain this amount not more than about 23 acres have been worked over superficially, and 2 acres (in the Gopher claim) have been worked to the bed-rock, whereas the company owns 490 acres of auriferous gravel, computed to contain gold of the gross value of nearly \$60,000,000 (12,000,000/). From this has to be deducted 25 per cent. for cost of working.

OREGON HYDRAULIC.—We purpose giving some further particulars about this property, which is immediately to commence its operations. The area of auriferous gravel is of no less extent than 588 acres, and the company intend at once to work a considerable portion of this gravel by washing simultaneously on what has been called the Reed claim and on the Thoss claim, both of which have produced a considerable quantity of gold, though worked in an irregular and rough fashion by the former owners. During the winter and spring months about 2000 or 2500 in. of water will be available for the claims, and careful examination this autumn warrants the statement made in the first report on the property—that the company would also have water during the driest months of the year. Though the company is not following out exactly the plan of operations recommended by Mr. Powers (of Birdseye Creek), which was to fit up sections 1 and 2, because further investigation showed that at a small expense a good head of water could be made available to wash the Thoss gravel. We see no reason why satisfactory results should not equally follow, for the gravel on the Thoss claim has been also tested throughout, and proved to be rich. It should be mentioned that there is \$25,000 payable out of profits to the vendors, and that the ordinary share capital is not entitled to receive any dividend until the amounts paid on the preference shares have been paid back in full, when claims of shares rank alike.

RICHMOND CONSOLIDATED.—Last week's Journal contained a communication, signed "A Shareholder," calling for some authority for our statement that "ore bodies of this kind are generally richer in massive limestone." Our authority is none other than Mr. Clarence King, who says, "The ore bodies occupy the shattered shaly limestone zone, bounded by the quartzite below and more massive limestone above." As must inevitably be the case with all similar deposits, the walls of the vein are, more or less, irregular and undulating, the included ore mass pinching or widening in accord with the accidents of pressure and metamorphism—hence the remarkable changes in dip and thickness. The presence of quartzite should not be regarded unfavourably, although indicating eventually a change from smelting to milling ore. Quartzite is but a slip removed from the ordinary sandstone, and the semi-fusion of its component grains shows at once that it is a sandstone which has been indurated either by the action of heat alone or of heat and water. It is in quartzite that are found the enormous ore bodies of the Comstock, and should it become necessary at Richmond (as seems likely) to erect mill machinery in lieu of furnaces, it may be safely presumed that the reserves of smelting ore will prove sufficient to keep the furnaces fully employed during the whole period of transition. In such a case greater permanence and productiveness, if not increased richness, would be the primal feature of the Richmond Mine.

EBERHARDT AND AURORA.—When penning our remarks last week in reference to this property, and directing favourable attention to it, we had scarcely looked for a profit so great as 13,428/- from a 40-days run. The latest advices are the most satisfactory. Apart from the debentures (a very small amount) the capital is \$235,000/., and the current rate of profit is not less than 100,000/- per annum. Taking the shares at present market price, the property is selling at an aggregate of 211,500/-. The first shipment of bar-silver, value 7500/., is to hand.

PATELEY BRIDGE LEAD MINES AND SMELTING WORKS.—One of the important features in this group is the fact that while other mines of the district are unable to work for a portion of the winter months, or subject themselves to a heavy expenditure for steam-pumping machinery, a series of lodes in the eastern section of the company's property, which has afforded profitable working in the upper levels for more than a century, is drained by the Eagle level to a depth of 60 fms. below all the former workings. In no instance are the lodes other than rich in the bottom of the levels, thus proving the continuance of the courses of ore, and there are abundant reasons to conclude that in this part alone there is a profitable existence in at least as long in the future as there has been in the past. Again, in the cross-cut at the 20, in the western mine, there are three important lodes to intersect, leaving 20 fms. of backs unwrought, all of which

have been rich in the level above; these will be intersected in the course of a few weeks. There is also the main drivage at the 50, on a lode 5 to 6 ft. in width, going into whole ground, where nothing has been taken away above; this is a point of considerable promise for further important discoveries at an early date.

ARGENTINE GOLD.—The great success resulting from the operations at the St. John del Rey Mines is stimulating the development of similar formations in other regions. With ore that yielded an average of (say) 1 oz. of gold per ton, with large expenditure, St. John del Rey earned last year a net revenue equal to 40 per cent. per annum upon its capital; its present profits represent something like 50 per cent. per annum. The capital of the St. John del Rey is \$253,000/.; the capital of the Argentine Company is \$60,000/., and, according to the practical testimony of Mr. Holman and Captain N. Coward, the average gold contents of the ore is more than 2 ozs. per ton. The St. John del Rey ore has to be raised from a depth of nearly 300 fms.—that from the Piqué Mine (the property of the Argentine Company) only 50 fms.; so that, while the ore itself is on an average 100 per cent. richer, the cost of extraction should be at least 100 per cent. less. The reserves of ore at Piqué are already estimated to be worth \$300,000/.. The machinery now erected is ample for every requirement; 100 heads of stamps can be kept at full work. The Argentine Company promises the direct advantage of an expenditure of over \$100,000/., and many years in point of time. This property will be more fully referred to next week.

AMERICAN RAILWAY ENTERPRISE AND ENGLISH CAPITALISTS.

Some adverse and apparently unjustifiable criticisms having been put forward with regard to the KEOUK AND KANSAS CITY RAILWAY COMPANY, a very complete answer has been forwarded to us by Mr. E. Vernon, who is acting in this country for the company in question under the necessary power of attorney. Although it is probably going a little too far to state that the criticisms have been "impudently framed to mislead the public, and wilfully misrepresent facts," some allowance must be made for the strong language used by Mr. Vernon in his reply when it is considered that the facts which he mentions therein prove, to use the mildest terms, that the critic was not entirely unbiased in his criticism, and that he was undoubtedly too imperfectly acquainted with the subject upon which he wrote for his assertions to be of any real value to those whom he attempted to guide. That there have been some American railway projects brought forward upon the English market which would justify any amount of illnatured remarks concerning them is as well known to the public as to the gentleman whose criticism is now impugned; but as a rule American railway securities have proved satisfactory as investments to English capitalists, and the Keokuk and Kansas City Railway certainly appears to be exceedingly unlike any of the undertakings that have brought American railways into such disgrace in this country.

It is a series of such damaging insinuations that Mr. Vernon has had to reply to, that it is but common fairness that he should be permitted to answer them categorically. He complains, and not without justice, that the critic is not candid enough to state that every precaution has been taken in this particular case, and for the first time in this country, to guard against the repetition of mismanagement or misappropriation of funds which have heretofore cast discredit upon American railroad enterprises. He complains that the critic does not tell his readers, as any impartial critic could have done, that if the money is subscribed, and it is confidently believed that it will be, none of that money will be paid over to the railway company or to the contractors, except as five consecutive miles of road are completed and a certificate thereof furnished by an English engineer-in-chief, appointed on behalf of the bondholders, that the financial supervision of all moneys invested in the undertaking will practically be controlled by the English trustee appointed by the subscribers; and, finally, that the gentlemen connected with the Keokuk and Kansas City Railway Company have made definite arrangements for depositing two years' interest on the bonds in the hands of trustees, with the view of protecting investors against any possibility of default in interest during the construction of the line and until its earning capabilities are developed. Of course the publication of these particulars in the same paragraph which contained the adverse comments would have tended to modify the reader's views with regard to the character of the project.

The truthfulness of the engineer's report is admitted, yet the statements made therein are repeated in such a garbled form that the idea is created that it is an unfavourable, instead of a favourable, report. Mr. Vernon explains, as the prospectus had, that the bonds will form a first charge on 225 miles of railway, and that the \$500,000, now asked for will not be secured merely on an expenditure already made of, in round numbers, \$200,000/., but it will be the first charge when the railway is built on a property which will have cost \$2,340,327 (568,065/), and the earning abilities of which are clearly indicated in the engineer's report, in which it is also pointed out that the existing equipment is amply sufficient for the purely local traffic, while any through traffic derived from or passing over connecting lines of railway is mainly hauled in cars belonging to those lines. At the time the engineer examined this portion of the property the whole section of country had been visited by long-continued and furious rain storms, extending over a large area, and over several weeks in point of time; that those storms had resulted in a general washing out and cutting up of the surface of the country; that the floods were not only unusual at that season, but unusually high for any season, rising, it is recorded, in many places higher than has been known since a great flood in 1844. That although under such circumstances of weather it was not surprising that the completed railway should have presented a somewhat dilapidated and neglected appearance, still it is only fair to state that he travelled over considerable distances on existing lines in full work which presented a similar and no better appearance. The condition cannot be very bad when we are told by the engineer's report that an intelligent road master, with a couple of extra gangs, would put all in order in a month at a trifling expense.

Referring to the doubt expressed as to whether the \$500,000/ will complete the line, Mr. Vernon very naively asks whether the critic who is acknowledged to know nothing about engineering and cost of construction presumes to question the very careful estimate made by an English civil engineer of recognised standing and ability in his profession, Mr. Younghusband, and practically to say that a gentleman whose probity and intelligence have been equally vouched for, has prostituted that intelligence and professional ability by rendering inaccurate estimates capable of misleading and deceiving the general public. Mr. Vernon very reasonably complains that the critic fails to notice, as any impartial and unprejudiced reviewer would have done, that the prices of labour and materials are much lower now than they have been for many years, ranging from 20 to 30 per cent., and that the present low price of all materials necessary for the construction and equipment of railways enables the company at this date to build the line most economically, and at the same time in an efficient manner. Mr. Vernon states in this connection, and that without fear of contradiction, that no American railway enterprise ever presented to the English public has ever been so thoroughly sifted, or has been submitted to more crucial tests by the bank, by the solicitors, and by the engineer, than the Keokuk and Kansas City Railway. There are no misstatements, no representations which can grossly mislead. There is no line either of the prospectus or of the engineer's report, as there is in every line of your article, a wilful perversion of the truth.

With regard to the estimates of expenditure and returns, Mr. Vernon very clearly shows that nothing imaginary is indulged in. The actual figures for the 15 $\frac{1}{2}$ miles already worked are given, whilst for the 106 miles of road between Salisbury and Kansas City the estimate is given as such, and is borne out by the engineer's abstract of report, which shows that the traffic receipts (based on comparative statistics of other railways in similar sections of country, and careful examination into the resources of the line proper) should amount to \$5000 per mile annually immediately on the construction of the railway, but within a very few years they will average \$7000 or \$8000 per mile annually. The same report and the abstract

of it, published in the prospectus, shows that the working expenses should not exceed 60 per cent. of the gross receipts, and the minimum estimated earnings would be amply sufficient to meet the interest annually accruing on bonds.

The Keokuk and Kansas City Railway Company do not state, as has frequently been done by other American railroad companies issuing loans, that their earnings will be \$8000 or \$10,000 per mile per annum; but they have furnished the capitalists with actual and accurate data relative to the earnings of other railroad property in the State of Missouri, not half so advantageously situated for controlling business as the projected railway from Keokuk to Kansas City—they have estimated the cost of construction at the maximum, and the probable earnings at the minimum, an entirely different form of procedure to that hitherto prevalent. They have given minute official details of the character and resources of the country traversed by the railway, and everything has been done to avoid any statement approximating even to exaggeration, and to place before the public the truth, the whole truth, and nothing but the truth.

That efforts have been persistently and conscientiously made to lay every essential fact before the British capitalists, whose aid is sought is sufficiently proved by Mr. Vernon's answer, and it is much to be regretted that when such large facilities have been offered by the railway company for careful and searching investigation the publication of calumnies, instead of commendation, should have been indulged in, through the abandonment of fair and unprejudiced criticism by the same critic, whose vision has been so conveniently impaired in cases where there was just and reasonable cause for censure, and where the omission to direct attention to "statements which could not fail to be grossly misleading," resulted in serious loss to capitalists whose interests were pretended to be cared for, and in creating a cause of complaint against the United States as a safe and remunerative field for investment, which otherwise would never have existed. The Keokuk and Kansas City Railway is evidently one of those enterprises which has a brilliant future before it, provided it can surmount the financial difficulties which rendered the application for the loan now being placed necessary, and is, therefore, in every respect worthy the attention of those in a position to render the assistance sought.

ENGLISH AND AUSTRALIAN COPPER COMPANY.

For the information of shareholders in this company a shareholder has sent us the following remarks, which will no doubt be of much interest to new proprietors, as well as bringing to the notice of a large number of people who are now looking around for safe and *bona fide* investments a new channel wherein to invest. In laying these facts before them we do so with the knowledge that this company is not of recent introduction, but has been in existence nearly 25 years, having been formed in the year 1851 for the purpose of smelting ores more especially from the Burra Burra Mine, since which it has grown into a large undertaking, having works at the Burra, at Port Adelaide, and at Newcastle, New South Wales, besides a most valuable freehold wharf property at Port Adelaide. The sources from whence the supplies of ore are received are not confined, as formerly, to the Burra Burra Mine, but now extend over all the copper producing localities in Australia and to New Caledonia, this last new supply promising daily to become of immense importance to the company. The Government of South Australia have quite recently pledged themselves to pass a Bill for a railway to the Far North; this, as is well known, will open up unlimited supplies of ore, as stated in Mr. Austin's letter in the *Mining Journal* of Oct. 2, which can be easily placed on the floors of the company's works at Port Adelaide.

Like most other mercantile undertakings, this company has had its times of adversity, and was but recently neglected and thought little of, but through the great energy of its direction, and of its indefatigable manager in Australia, it has been safely steered through all its difficulties, and now promises to be one of the most flourishing dividend-paying companies under its present management. Having no mines of its own, being exclusively a smelting company, it is free from all mining risks—and, indeed, risks of speculation, for whilst it is daily purchasing ore in Australia it is also daily selling copper here, so that if an average of only a few years is taken it must be a profitable concern, even though the actual ore bought in one month may not be sold as copper till some months later. This might temporarily affect the profits of any particular half-year should any violent fluctuations occur in the price of copper, but as the company sends a weekly telegram to Australia the chance of its not regularly paying dividends is reduced to a minimum. In March last it paid a dividend of 2s. per share, being 4 per cent. on the paid-up capital of the company for the half-year; and again in August another dividend of same amount was declared, being at the rate of 8 per cent. per annum, and 10 per cent. upon the market price of its shares. It carried forward after paying the above dividend in March over 3000/- profit, which amount still remains intact, the August dividend having been declared out of the profits made during the first six months of the company's financial year—July 1 to Dec. 31, 1874. The directors, as stated by the Chairman at the last meeting, are anxious to continue paying dividends of a regular amount every half-year, and for this purpose, although a larger dividend might have been declared, they wisely postponed increasing it, preferring to carry forward a good balance, which, with a reserve fund of over 11,000/-, should place them in a sound financial position. The above balance of over 3000/- from last annual report, together with the profits for the year, during which there have been no violent fluctuations in the price of copper, should show a handsome amount of profit available, after deducting the August dividend, for distribution at the annual meeting in February next, though whether the direction may still recommend the more judicious plan of not dividing too closely will remain to be seen.

As the copper market goes there seems but little chance of either a rapid rise or fall, and this steady market is most conducive to the interests of the shareholders, who it is believed have now a prospect of receiving for a long time regular and good dividends, for without any great risk it is evident that 8 per cent. per annum, or as is probable even 10 per cent., in such an undertaking is more satisfactory than higher rates in questionable enterprises of no standing, or in foreign loans with the risk of repudiation or entire collapse.

SPANISH AND RIO TINTO BONDS.—The Master of the Rolls had before him on Wednesday the case of *Menzies v. The Corporation of Foreign Bondholders and Don Jose Borrajo*. The plaintiff, Mr. Graham Menzies, is the owner of 100,000/- in Spanish bonds. It appeared that a contract was entered into between Messrs. Matheson and Co. and others and the Spanish Government in 1873 for the purchase from the Spanish Government of the Rio Tinto Mines by ten annual instalments. The instalments were secured to the Spanish Government by a series of pagares. The Rio Tinto Company was formed to work the mines. An arrangement was subsequently made, at the end of 1871, between the Government of Spain and Mr. Roger Eykyn, as representative of the Council of the Corporation of Foreign Bondholders, on behalf of the holders of overdue coupons of Spanish bonds, that the pagares above referred to should be deposited with the Council of the Corporation of Foreign Bondholders. Mr. Menzies, on behalf of himself and all other holders of overdue coupons of the 3% per cent. External Debt of Spain, filed this bill to restrain the defendants from cancelling the pagares and substituting for them Rio Tinto Bonds. The defendants demurred to the bill for want of equity and on the ground that a necessary party—the Spanish Government—had not been made a party to the suit. Mr. Robinson, Q.C., and Mr. Romer for Don Jose Borrajo; and Mr. Davey, Q.C., and Mr. Kekewich for the Corporation of Foreign Bondholders, did not appear in support of the demurser. Mr. Chitty, Q.C., Mr. Monaghan Cookson, Q.C., and Mr. Spingal Thompson supported the bill. His lordship allowed the demurser, being of opinion that the Spanish Government had not ratified the arrangement, and that on various technical grounds the bill was unsustainable. He, therefore, refused to give leave to amend the bill, which was consequently dismissed.

Vice-Chancellor Bacon has appointed Mr. J. Waddell provisionally official liquidator of the General Register and Meter Company (Limited).

HOLLOWAY'S OINTMENT AND PILLS: CHEST AND STOMACH COMPLAINTS.—The source and centre of almost every ailment is impurity of the blood: dislodge this poison, and disease departs. Holloway's pills exert the estimable power of thoroughly cleansing each component part of the blood, and rendering this fluid fit to perform its important functions. They cope most successfully with chest diseases, stomach complaints, liver disorders, and many other the ladies which were once the besetting dangers of mankind at certain seasons in town and country. The directions for use enable everyone to regulate the operation of these pills with the greatest nicety. Chronic invalids, nervous sufferers, and all whom other treatment has failed to relieve are respectfully invited to try Holloway's celebrated medicine, which will strengthen and cure them.

Greetings of Public Companies.

RUSSIAN (VYKSOUNSKY) IRONWORKS COMPANY.

The annual meeting of shareholders was held at the City Terminus Hotel, Cannon-street, yesterday (Friday),

Mr. WILLIAM AUSTIN in the chair.

Mr. C. CLARKE, the secretary, read the notice convening the meeting, and the report of the directors was taken as read.

The report of the directors stated that a period of three years having elapsed since the accounts were examined in Russia by the company's auditors, the directors arranged at the close of their financial year to have a special audit at Vyksa. The capital stock stands at £2,700. The special liabilities to the Imperial Government accruing during the past year have been duly met. A sixth instalment of 3437/- has been paid in respect of the rail mill advances, leaving due £13,750/- on this account, and a final payment of 1481/- has cleared off the arrears of interest to the Government, which had accumulated in the earlier years of the company, to the amount of £7,160/- The usual accounts have been submitted to the Princess Galitzin, the company's co-proprietor; and the payment of the amount due has been ordered to be made as soon as the accounts have been examined and agreed. The company's share of the profits of the works for the past year is £638/- This amount is increased by interest on investments, and by profits on securities realised during the current and preceding years, and also by an amount received in respect of calls in arrear on forfeited shares. The sum allowed out of the gross profits towards the London expenses is this year £2200/- The net profits after payment of London expenses, and writing off sundry balances, are £892/- £2369/- included in the above amount as profit on securities realised during the last two years, being of an exceptional nature, the directors propose to transfer to the reserve and contingencies account.

In addition to the interim dividend of 5 per cent. already paid the directors have declared a further dividend of 5 per cent. free of income tax, payable on Nov. 6. The directors regret that they do not deem it prudent to continue the full rate of dividend which has been distributed during the last three years. They were obliged to submit to a considerable reduction in the prices of sheet-iron and wire during the past year. These reduced prices for manufactures, and the increased cost of production, especially in the important item of fuel, have very materially lessened the year's profits. As the prices asked by the Government have been so materially advanced as to render it impossible for the company to purchase the wood they require of the Government except at ruinous rates, the board considered it advisable to confer with their manager personally on the subject, and they have reluctantly come to the conclusion that the prudent course to be adopted is to close for the present a portion of their works. It is, however, hoped that some sufficiently favourable arrangement may yet be made with the Imperial Government, but until this is effected it will be obvious that the operations of the company must be considerably restricted.

The CHAIRMAN said: Gentlemen, the first and most important item that strikes me this year is the diminution of profits, and on that point I propose to say a few words. We are suffering principally from the state of the trade. The state of the trade in Russia appears to fluctuate up and down in the same way as the state of trade in England—particularly in iron. The profit from the works during the past year shows a diminution of 17,940/- compared with the previous year, and that has resulted from several causes. We have paid more for our wood, charcoal, and minerals, to the extent of 6914/- while we have also suffered in the prices obtained for the iron produced to the amount of £563/- So that the principal cause of the diminution of profit have been those two items—the increased cost of production and the diminution in the prices obtained. Now, I think we prepared the shareholders for less prosperous times at our last two meetings. We were guided in this by the contracted prices at which we sold our iron for the respective ensuing years; and with regard to the contract which was made last month for the coming year, I am happy to state that, as far as that will affect us, prices either remain the same as the past year, or show a very slight increase in some unimportant items. But the point which gives the directors the most anxiety, and has given us the most anxiety for some time, is the question of the supply of wood. Now, three or four years ago we had, as we all know, a very prosperous time in our manufacture, and we pressed on the manufacture to the greatest extent we could naturally; and partly from the effect of that, and partly from other causes, the price of wood has advanced very considerably—so much so, indeed, as to cause us very great anxiety. Now, our own forests do not afford us the requisite supply of wood at present, and the consequence is that we have to buy wood of the Government, and the habit of the Government is to put up to auction certain sections of wood on different estates and sell it thus in sections. The prices realised at these auctions have increased enormously, and we have searched out the causes of this increase. At first we thought it might be the construction of railways, or other causes of that kind; but later we discovered the real cause to be the competition of other ironworks, and the competition of the peasants, who use the wood to build their houses. Every now and then a village is destroyed by fire, and it has to be rebuilt of this wood, which we should be glad to get for our purposes. Now, one can easily understand that our increased production of the last few years has tended to make the villagers much more prosperous, and, therefore, has enabled them to give a higher price for wood; and, so far, we have injured ourselves by this increased production. But we have (as mentioned on former occasions) entered into negotiations with the Government to contract for a certain amount of wood, to be ensured tons of certain number of years; but hitherto we have not succeeded in completing any contract of this kind. Of course, the Government department of Woods and Forests are not very willing to let us have these woods at a lower price; but, at the same time, so much depends upon the prosperity of the company, we have so many of the inhabitants of the district who really depend us for support, and we pay so much in taxes, that I am quite sure the Russian Government, if it take a broad view of this matter, cannot fail to see that it is to their interests that they should allow us to have a sufficient supply of wood for our purposes at a price that will enable us to use it remuneratively. However, hitherto we have not succeeded in completing a contract of that kind; and, therefore, to this extent our future is involved in some uncertainty, and in some anxiety. We shall have in a certain number of years a sufficient amount of wood on our own estate; but we have never overtaken the deficiency existing at the time of taking possession. Wood, particularly in that climate, is slow in growing, and we have not been able to give our forests that amount of time which would enable them to afford us a sufficient supply. We have ordered a thorough survey of these forests, but that has not been completed, so that we are not even in a position exactly to define in what period we shall be able to supply the whole of our furnaces with wood from our own estate. Now, we propose to declare a smaller dividend on this occasion than last year. We have already paid the shareholders 5 per cent., and we now propose distributing another 5 per cent., making 10 per cent. for the year, whereas last year we gave 15 per cent. in all. And on that point I wish to remark that there is a considerable balance of profit and loss shown upon the accounts, which would lead shareholders who read the accounts cursorily to expect a larger dividend, but we must never forget we began this company with insufficient capital, and that we have been obliged to find a large proportion of the capital requisite to meet our liabilities out of profits, and, therefore, it does not follow that which is shown as balance is capable of being divided among the shareholders. We have (principally out of profits) during the last six years paid back to the Government 27,000/- arrears of the interest on the old debt which had accumulated. We have also paid about 20,000/- of the 30,000/- which they advanced us to put up a rail mill. We have also paid their local dues to a large amount, and we have paid them a tax upon iron to a very large amount, so that our total payments to the Russian Government on these accounts during the last six years have amounted to 150,000/- And we shall put this forward as a strong inducement to the Minister of the Russian Government when we ultimately ask them to give us a sufficient supply of wood to carry on our works without serious diminution in the profits. Now, as I have said, we have been obliged to use a great quantity of our earnings for capital purposes, and the result of that is that we are not in a position to divide more than 5 per cent., which we recommend for your adoption. The company's share of the net profit of the works carried on in Russia during the year 6036/- Now, the 10 per cent. which we propose to pay during the present year amounts to 3270/- so that we are nearly dividing that of that amount, but we have made other profits—contingent profits—which also increase our profits in the balance-sheet. But with regard to our cash in hand, which is what principally guides us in determining the dividend, it will be seen that we have a balance in hand in London of 720/- and at our bankers in St. Petersburg of 2373/- while we have invested in Russian Government securities 10,592/- making the immediate cash assets in hand £3,685/- Now as to our liabilities. We have to pay to Princess Galitzin, the company's co-proprietor, 8514/- on account of her proportion of profits to the Government the sum of 3437/- which is now in course of payment, being the yearly instalment on the rail-mill, and we owe our bankers at St. Petersburg 870/- so that having 13,685/- immediately available cash, we have immediate abilities of 12,829/- besides which there is the dividend which we propose to pay immediately of 2335/- And, moreover, we have the certainty of having to pay during the next three years 3437/- to the Russian Government on account of the instalments of the rail-mill. Such being the financial position and prospects of the company, I do not think anyone would be so unwise as to denude the concern of all its immediate available cash for the purpose of increasing the dividend, having, moreover, the prospect of smaller dividends being earned in ensuing years. You may collect, there was a proposition that we should guarantee a very large fixed payment. We are in the same boat with them now; they profit when we profit, and vice versa, and if the profits are smaller we are not burdened with this large fixed payment. I may mention here, and I do so with pleasure, that we are very good terms with them. We have lately had a telegram to say that the accounts have been approved by them, and that the payment has been made—(hear, hear)—and so far that is satisfactory. This year we have had the accounts audited on the spot by the company's auditors—Messrs. Kemp, Ford, and Co.—and I am bound to say that their agent has audited them in a very careful manner. He has not only audited the technical, but he has looked to a certain extent, so far as his time and means allowed him, into the state of the works, and given us his advice as to the mode of conducting them. And although he has found certain faults, I believe I may say, and I do so in Mr. Kemp's presence, they are substantially well kept, and show a fair representation of the state of things at Vyksa. This we have done periodically, and it is satisfactory that it should have resulted in this way. (Hear, hear.) With regard to the stocks in the company's hands, it is, of course, somewhat difficult to estimate the large quantities of charcoal which we have to keep in hand, and certain discrepancies have been found out, but, on the whole, I think that my result is satisfactory, and our manager at Vyksa is disposed to think that the Vyksa estimate of charcoal is more correct than that made by Mr. Kemp's agent. However, that question will be proved in the winter, when they come to consume it. Now, looking, to the future, I may mention that we thought the state of things so serious that we had the manager over here to consult with him, and we have decided that under the present circumstances it will be advantageous to limit our operations to a certain extent—that is, not to press on the production of iron, but to close certain parts of the works which are less profitable than others, and we chose those works which are most liable to competition. For instance, there is one part of the works to which we used to take bar-iron, because there was a good supply of wood in that district, but now that the wood in that part is consumed in a great measure by the new works erected, which necessitates our carting wood and water there, the work has become less remunerative, and therefore, we shall choose this and those other parts of the works which are less

productive in which to limit our operations. And if by these means we succeed in diminishing the price of labour, and wood, and charcoal, it is possible that a smaller profit may result in an equal amount of profit to the company. But as to the future, I think any man would be bold indeed who would predict the profits to be made upon ironworks, because, even in this country, where ironworking is carried on in the most scientific way, we see how much it varies from year to year. I believe, however, that in Russia fluctuations do not occur to the same extent as in England, where the facilities for producing iron are so great, owing to the plentiful supply of coal, that when high prices come the production suddenly becomes very much greater than it possibly can be in charcoal-burning districts. The Chairman then concluded by moving the adoption of the report and balance-sheet.—Mr. A. C. SHERIFF, M.P., seconded the resolution.

Mr. TENDRON having asked one or two questions upon the accounts went on to question of the directors' remuneration. When this matter had been broached on previous occasions the directors had placed themselves behind the Articles of Association, and had told the shareholders if they wanted to change the directors fees they must change the Articles. Now, that they all knew involved considerable expense; besides he did not wish to act in so hostile a manner to the board, he would rather appeal to their good feeling, and ask them if they did not think 3000/- per year too large a sum for the management of so comparatively small a concern as this. But while they maintained their own remuneration he was sorry to know that their manager, upon whom so much depended, should be in receipt of only 700/- He feared that the company would never secure a competent man for such a salary, and he thought the capabilities of their present manager were shown in the fact that whereas in 1873 the profits amounted to 44,000/- last year they did not exceed 15,000/-

Mr. BOYERMAN desired further information from the auditor as to his audit.

Mr. SANGSTER asked when the company's lease expired, about which time the company had to give back 77,000/-?—The CHAIRMAN answered 27 years.

Mr. SANGSTER questioned the advisability of investing 10,000/- at the present time in Russian securities. They all knew how greatly indebted all interested in the company were to the talents and energy of their Chairman; yet, nevertheless, he thought the remuneration of the directors too high, and suggested that it would be a graceful act on their part to relieve the company of some of this burden.

Mr. KEMP (auditor) explained that his report dealt very voluminously with the company's working, which it would hardly have been desirable to publish in full. With regard to matters of administration, he had suggested certain alterations in the mode and manner in which the books were kept, which would not carry into effect. With regard to the discrepancies discovered, they did not involve any large sum. As to the unfortunate mistake with regard to the purchase of wood, involving a loss of 2000/-, that had arisen through an error of judgment. The exchange account might be regarded as so much capital reserved. It must be some time before that amount and the sum standing to the credit of the profit and loss account—26,000/-—would be available for distribution, the money being at present employed as working capital. He looked confidently to the result of an application to the Russian Government in regard to the supply of wood, seeing the strong claim they had upon the Government in consequence of their importance as a manufacturing company.

Mr. TENDRON thanked Mr. Kemp for his explanations.

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The company appears to possess excellent prospects; the property is now making profits, and by an extra judicious outlay it is expected that these can be largely increased. Business has also been done in Cardiff and Swansea, Thorp's, Gwbert Hall, West Mostyn, Bilson and Crump Meadow, and one or two others.

A meeting entered into with the Mineral Trusts Company. This will come into effect next month, and it is for the sale of 800 tons of the old burrows monthly to the latter company. It is expected the treatment of this waste by the Emmens process will result in large profits, and we understand the Trusts Company guaranteed 200/- per month to Bampfylde. The shares, however, continue weak at 10/- to 15/-.

The foreign mine share market has fluctuated. Richmonds have been up one day and down the next for some days. Various rumours are floating about as to the expected dividend, and the cabled advices from the mines are looked for with great interest. The last price shows further weakness. In other shares, although prices have been changing, there is nothing of importance to chronicle. We may note, however, a decided fall in Sweetland Creek.

JAMES H. CROFTS.

FOREIGN MINES.

ST. JOHN DEL REY.—The directors have received from Morro Velho the following telegram, dated Rio Janeiro, Oct. 30:—*Produces 11 days, second division of October, 20,000 cts.—7750/-, yield 9/- oits. per ton. General work in mine and on surface going on well, and satisfactory duty being accomplished.*

DON PEDRO.—Letter from mine captain, dated Sept. 23:—*The ore has been derived from Nos. 6 and 8 shoots, and no boxwork available. The general work is of a low standard. The water being drawn from the mine still amounts to 20-57 cubic feet a minute. The 35 cross-cut and the 35 north have been suspended for the last week, in consequence of the water being in the mine. We are repairing Vivian's shaft below Alice's level. On some occasions we have been obliged to break the wheel for a short time to bring in the long timber. The bucket rod has parted in the drawing-lift on two occasions. In our explorations nothing has been discovered worthy of note.*

Sept. 30.—*The ore returned has been derived from Nos. 6 and 8 shoots. Four boxes of ore have been obtained from the north vein in No. 8 shoot, and that is all that has been taken out during the month. The general work is of a low standard. We have opened a new slope below the 25, on the north part of No. 6 shoot, where there is a small pillar of ground standing that will do to take away. The water being drawn from the mine still amounts to 20-57 cubic feet a minute. The 35 cross-cut and 35 fm. level north have been suspended for eight days, in consequence of the water being in the mine. We are repairing Vivian's shaft below Alice's level. On some occasions we have been obliged to stop the wheel for a short time to bring in the long timber. The bucket rod has parted in the drawing-lift on two occasions. In our explorations nothing has been discovered worthy of note.*

SAN PEDRO (Chile).—R. M. Kitto, Sept. 14:—*I arrived at the mines on the 8th inst., and am glad to state found everything in good order, and the engine working remarkably well.—New Shaft: The water is now about 26 metres below the 135'; the timbers in the shafting being quite rotten, we are obliged to remove and replace them by new, which is being done by the shaftmen; we shall also put a ladder-road in the shaft from the 135' to the 150' before we begin to drive the 150' cross-cut. In the meantime we are drawing all the stuff that had accumulated at the various levels, as well as drawing the tributaries' ore. We hope to be enabled to begin to drive the 150' towards the Manto San Pedro by the end of the present month. A tribute pitch in the back of the 110 will produce 25 per cent. ore per fathom. A cross-cut driving south of west, at the 85', is producing good stones of 40 per cent. ore, which is a sure indication we are getting near the manto. A tribute pitch in the back of the 75' will produce 1 ton of 25 per cent. ore per fathom. A tribute pitch in the bottom of the 45' will produce 2 tons of 20 per cent. ore per fathom. A tribute pitch in the bottom of the 8' will produce 2 tons of 20 per cent. per fathom. Nearly all the tributaries are dressing up their ores against Sept. 18, which is the day of Independence. I am glad to say that everything is being put in good working order both underground and at surface.—Cuba Mine: We have intersected a manto here, which is producing stones of ore of 25 per cent.; it is being driven by two men, \$18 per metre. We have also had work in the Santa Elena and San Antonio Mines; there is nothing new in either to report on.*

RICHMOND.—Oct. 12:—*Since my last we have cut some ore in the 700 drift; I should have cabled you about it, but as it is not very wide where we struck it, and may not be anything permanent, I have delayed doing so until we have opened more on it; where we met it was 3 ft. wide; in rising it narrowed, and today is widening again, being now 4 ft. wide, and the nature of the ore is such as to lead me to believe that it is connected with an ore chamber somewhere near. I am now rising and driving on it; it is looking very promising, and I sincerely hope it will turn out to be something good. We will push on explorations on this as fast as our hoisting machinery will permit. We are very limited for hoisting power, especially now in the deeper levels. The winze sinking below the 600' is all in limestone; since we have struck the ore in the 700' we have suspended the sinking of the winze; we are now driving to ascertain what ore we have at this level; we are now down about 50 ft. The ground below the 600, in the winze, does not look favourable for any large body of ore, the ground seems to be flattened; we shall drift from this winze in several directions to prove the ground, and in the meantime open on the ore in the 700, and prove where it goes; if it should communicate with the ore above it will be quicker work and cheaper to rise in ore than to sink in limestone. The stopes between the 500' and 600' are still looking very well. By next week the 600' drift will be into the winze, and the railroad cut in, when we shall be able to draw a little more ore from this place. You will have seen by the certificates forwarded that the ore smelted lately has been of very low grade, especially in lead.*

RICHMOND.—The ground in the 200' has changed within the past week; it is more stained with ledge matter, and more favourable for working. I am looking with considerable interest at this level, and hoping we shall find something when we get near the quartzite. The stopes on the west side of the hill is looking very well, and turning out ore of very fair grade in gold and silver, but very low percentage in lead. We are sinking on the footwall of which I spoke to you; we are down about 8 ft., with good ore near the bottom. I forgot to mention that we have not yet resumed sinking the shaft, but hope to get everything ready to start again next week; when we stopped sinking the bottom was in very favourable ground. The three furnaces are working very well, and smelting large quantities of ore. The machinery is in first-rate order, the engine is working very smoothly—indeed, could not work better than it does.—Refinery: We are working two apparatus; the flues are not yet clear of lead, we are still taking it out; there is a large quantity, and in one place is 2 ft. thick. We are doing much better work with the apparatus that we were, and the lead separates much better. We are also shipping crude bullion to Omaha, to lighten the stock. The holding-down bolts for the hoisting machinery are here, and the engineer is preparing his templates to begin building the foundation. I will write you again in a few days about the 700, and keep you well advised.—R. RICKARD.

FRONTINO AND BOLIVIA.—The directors have advised (July 12), accompanied by the mine accounts for the month ending June 20. Pending the negotiations for peace (which are now happily concluded) the gold, which is valued at \$104. 8s. 1d., is retained by the company's bankers in Medellin, but is now probably on its way to England, the communication between this country and New Granada having been opened up. Notwithstanding the stoppage caused by the tempest referred to in the report from Mr. R. White, the produce of gold for the month of June amounts to 1268 ozs., and the profit, 1185/-, is the highest which has been attained. From Mr. White's remarks under the head of "Cecilia," it appears that the lode in the Pugidion cross-cut of that mine is composed of rich masses of the extraordinary thickness of 17 ft., while in the last paragraph of Mr. White's report Mr. White tells us that he hopes next month to give us still better accounts of the mines, "which as yet are only giving promise of their future prosperity."

HORNACHOS.—A telegram was received on the 4th inst. stating that in driving the cross-cut from the main shaft P 2 of the Desondida Mine, they have intersected four rich veins or leaders of lead ore, assaying 40 per cent. for lead, and 128 ozs. of silver per ton. Another shipment of minerals is on the way, making for this year already over 170 tons, or value (say) \$6000. produced from the old workings alone, leaving the stopes opened out by this company intact. The works at the above mine and at the Afortunada are being pushed on energetically.

POLIMA.—The directors have received advices by the mail of Oct. 30 from their mines. The following is an abstract:—*Frias: July returns, \$9937.04/- expenses, \$4082; less permanent works, \$10943.8/- \$8813.7/- profit, \$1628.14/- August returns, \$4549.34/- expenses, \$9306.13/- less permanent works, \$4411.34/- \$4594.61/- profit, \$564.8/- total profit \$2187.64/- equal in sterling value to \$364.12s. 7d. The July reports give 30 fms. 5 ft. 2 in. of ground expended, of which 18 fms. 4 ft. 3 in. were unproductive, leaving 12 fms. 0 ft. 11 in. productive ground. The August reports give 30 fms. 5 ft. of ground expended, of which 16 fms. 4 ft. 9 in. were unproductive, leaving 14 fms. 0 ft. 3 in. productive ground. The underground agent reports as follows, under the respective dates of July 31 and Aug. 31:—The 30 West: This end is still unproductive, and has advanced 10 ft. 9 in. The character of the ground is the same as last reported on. The rise has advanced 11 ft. 6 in., but no mineral has been cut as yet; set at \$70 per fathom (July 31) and continues the same as last reported on (Aug. 31). The 30 cross-cut continues on extra hard ground; set at \$160 per fathom (July 31).—The 30 East: This station has been worked day and night, and driven 20 ft. 6 in. No mineral has as yet been met with, but as the upper level has mineral in the bottom, no doubt the same will be found at this level. The bottom stopes have been under water the greater part of this month owing to the scarcity of water at surface to drive the engine-wheel at the required speed to keep the mine in fork. The long dry season continues, and until next month the wet weather will not set in. The back stopes have yielded rich ore, but as the ground is very tough no great quantities of mineral have been extracted. The branch of ore is six inches wide, and still holds good (July 31). No great progress has been made in this station, it having been under water for several days. Owing to the dry season there has not been sufficient water to drive the engine fast enough to drain the mine. The end is still dry and has advanced beyond the vault. The upper stopes are yielding good export ore. The branch is 4 in. wide, worth 300 ozs. fine silver per ton (Aug. 31).—The 30 Cross-Cut West: There is no change since my last report; it continues in very hard ground. The 30 rise west is progressing slowly.—The 20 East End: A very promising lode has appeared at the end; it is 4 ft. wide, and has mineral dispersed all the way through, the quality of which is poor at present, but poor mineral is generally followed by a rich bunch. Mineral of a similar class as found at the engine-shaft on the top of a rich bunch, therefore we may safely expect to meet with the same mineral in the 30 driving under. The stopes in the roof of this level are producing tolerably good mineral for the stamps, consisting principally of galena dispersed through the carbonate of lime, intermixed with pyrites (July 31). The lode continues improving; at present it is 5 ft. wide, containing ore all through. No doubt but that when the 30 arrives under this point we shall have a splendid piece of ground opened out for future stopes. The roof of this level has advanced 22½ ft., and has a branch of mineral rich enough to pay the cost of raising. We expect it will hole into the Spanish workings early (Aug. 31).—The 30 End, Welton's Lode: The branch of mineral at this end is 2 in. wide, and is rapidly improving; it is opening out rich ground for stoping hereafter. The ore extracted is worth 400 ozs. of silver per ton. The stopes on the roof of this level are nearly exhausted. What has been taken away was very rich. We must wait until the end has advanced before we can take away any more. It is still productive; the branch of ore is 4 in. wide, principally galena, with native silver. The ground is still hard for progress. The stopes on the roof of this level are still yielding rich ore, but in small quantities (Aug. 31).*

Yankee's End West: The ground is still disturbed by the influence of the miners, and lets out a great deal of water (July 31). It is gradually im-

proving, and the end is letting out much water, and beginning to pay cost (Aug. 31).—Engine-Shaft: The preparation to fix the new plunger-lift has been pushed on with all speed. The angle-bob has been fixed in its place ready to begin its duty. The rods have been attached to this bob, and connected with the 3 fm. level. The cistern is also in its place, but the insufficiency of water has prevented us from setting the plunger at work to drive the engine wheel, as mentioned above (July 31). The plunger-lift was completed and set to work at the end of this month, and I am glad to say it is working beautifully. The bottom of the mine up to the 20' was under water for several days, the continued dry season has completely thrown us back in obtaining the usual returns. We cannot do more than try to regain this loss so soon as the rainy season sets in, when we shall be able to dress the ore that has accumulated during the last two months (Aug. 31).—Surface Works: We can only at present accumulate mineral for the stamps or crusher (when ready), as no mill can be worked in such dry weather. The new wheel is progressing favourably, but cannot be completed in two or three months. In the meantime we shall try and work the plunger with the old one. The masons' work for the new wheel was completed this month, and they are finishing the crusher-house (July 31). The wheel for the new engine is nearly completed; the masons' work for the crusher-house is finished. We only want the shaft and belt to drive the crusher to complete this (Aug. 31).—Alluvial Gold Deposits: The ditch at the Alto Mine is progressing favourably (Aug. 31).

MALPASO.—Advices have been received announcing that a partial clean-up was made on August 30, after a run of 423 hours, 238 of which were on waste ground, with an average head of water of 240 inches, resulting in only 38 ozs. of amalgam. The small result of this clean-up is accounted for by the falling off of the water supply, which was chiefly owing to a breakage of the dam in the Medina river. The superintendent writes under date Sept. 15.—"I am glad to be able now to give a good report of the working of the mine. The result of the work done in August was not so satisfactory as might have been hoped for; the causes of this are stated above, and they could not have been foreseen. But since then the machine has been taken back to the head of the cut, more boxes put in, and now we are once more working with a fairly good head of water, which, the rainy season having apparently set in earnest, will not, I hope, again fall off. The head of water will not, I expect, be so good as it originally was, owing to the amount lost through the old flumes, which are in a very bad state, but if they will hold together for another month or so we shall have done with them altogether. The gravel we are now washing still continues rather hard, but is rich if one may judge from the fact that a single grain worth 20 cents was picked up a day or two ago at the place we are now working. There seems to be good reason to hope that the return from our next run will prove a contrast to the last. The new ditch is progressing well; the work completed on the new part is as follows:—All the grading done, 500 yards of ditch cut, one flame of 65 ft. long built, about 200 ft. of tunnel made, and timber prepared for about 100 ft. fluming and all the rest of the tunnelling."

MALABAR.—G. B. O'Reilly, Sept. 17:—*Mine: Our work of opening into the high banks to the east of our former cut has proceeded as well as could be expected; the ground has proved rather difficult, a band or ledge of hard rock having presented itself in the way of our cut between lines 16 and 17 map; this obstacle requires blasting, and we have now sunk down through it some 8 or 10 ft. in depth; it will take from three to four months more to get the cut down to grade. In the meantime, we are washing all we can on both sides of the hill. The ground hitherto has not proved so rich as we anticipated, but our facilities for working are much greater than formerly, and the bottom of the ground, when we are able to reach it, has every appearance of being much richer than the top. From the appearance of our sluice, and the rather improving character of the gravel, I think we may reckon on a pretty fair clean up by the end of this month or the middle of October. Hitherto about two thirds of the ground run has been waste. We are now beginning to get at the bottom ground, which ought to give a much larger proportion of gold. I shall lose no opportunity of keeping the board fully informed as to our prospects, but in a hydraulic mine there is little to remark from month to month.*

EXCHEQUER (Gold and Silver).—Lewis Chalmers, Oct. 11:—*You may rest as assured I will do my best to commence turning out bullion without delay. In the meantime, for the bygone week, I have to report as follows:—The engine-shaft is down 250 ft. 8 in. On Saturday the lode left the shaft on the north-east corner at a depth of 55 ft. 5 in. from the 200. In the south-east corner the lode is still in the shaft bottom. The north drift from the 200 was driven 6 ft. by one man, the others being sick or otherwise employed. The face of the drift looks well, and the 6 ft. driving on the foot gave us 3 carloads of good ore. This drift now measures 275 ft. from engine-shaft. The south drift in the 140' ft. level was driven 6 ft. by two men, and now measures 39 ft. from south side of rise, or 79 ft. south from wind. This is being run to make stoning ground above, and connect with the head of the 100' ft. stope; some fine ore in the face. The stope at the 140' has been worked to within 12 ft. of the winze on the north end, and shows some magnificent ore. It measures 50 ft. long and 22 ft. high, and has furnished 38 carloads of good ore during the week. The 200' ft. level furnished 3 carloads. Having sand to haul for bricks, I have kept six horses busy at that. We have 50,000 bricks laid. My new boiler will be shipped from San Francisco next Saturday; 50 in. by 16 ft. give steam for 2000 ft. The mine looks well.*

LUSITANIAN.—Oct. 26:—Palma: In Taylor's shaft, below the 180, the lode is 8 ft. wide, composed of quartz and stones containing ore. In River shaft, below the 140, the lode is large, composed of quartz; and in the rise above the 150, coming up against it, the lode is of the same character. The 110 cross-cut, south of Basto's lode, east of River shaft, is being driven in hard ground, and no lode has yet been seen.—Levella on Basto's Lode: In the 180, west of Taylor's, the lode is 3 ft. wide, composed of quartz and stones of ore. In the 170, west of ditto, the lode is 2 ft. wide, and is at present unproductive. In the 160 fathom level the lode is 1½ ft. wide, yielding stones of ore; a little way behind the end, say 2 fms., the lode will yield 1 ton of ore per fathom. The lode in the 150 west is 2 ft. wide, of quartz and country. In the 150, west of Taylor's, on the caunter lode, west of slide, the lode is 1½ ft. wide, composed of quartz and faces of ore, but behind the end a few feet the lode was worth ½ ton of ore per fathom. In the eastern end of the 150, on Basto's, the lode is 1½ ft. wide, of quartz. East of River shaft, in the 28, the lode is 5 ft. wide, composed of soft and hard quartz, with spots of lead. The lode in the 50, west of Taylor's, and west of the slide, the lode is 4 in. wide, producing stones of lead at times. The Mill lode in the 70, east of River shaft, is 1 ft. wide, composed of country, with spots of lead. The 60 cross-cut, east of Carvalhal, is still in a dry, hard, coarse gneiss, and we have met with no branch since our last report.

BENSBERG.—Charles Craze, Nov. 2:—*Victoria Shaft: In the last month this shaft has been sunk 6½ ft. Our progress has been slow during the last fortnight, owing to a slight defect in the steam valve of the large cylinder of engine; this has now been remedied, and the engine is again in good working order, and I hope nothing will turn up to prevent our making better progress in the present month. The lode in this shaft is improving every foot we sink, now worth 2½ tons of lead per fathom. During the Chairman's recent visit to the mine he was in this shaft, and while there some rich ore was broken from the lode (a specimen of which he took with him for inspection at the company's offices), and I am pleased to say the lode is richer, and presents a much better appearance now than it did then. The 14' west of this shaft, has been driven 9 metres 4 ft. 10, or about 5 fms. 9 in., in October; the lode here produces very much pyrites, with occasional stones of lead. On Saturday last we intersected what looks very much like a cross-course; we shall cut into it and see what it is, and some time this week will dial the level, after which I shall be able to speak more definitely as to its character, &c. The stope in the back of this level is not looking so well; the lode still produces good stones of ore, and I purpose putting up a rise to test its value above this point. The 14', east of this shaft, was driven 14 metres 2 ft. 10, or about 7 fms. 4 ft. 5 in., in the month; from this it will be seen that the ground is speedy for driving, but up to the present we have not met with any ore to value; this end is now about 11 fms. short of a winze which is being sunk in the bottom of level west of new shaft, where the lode produces 2 tons of ore per fathom; the winze down 2 fms., and it looks quite well as ever I have seen it. We have resumed sinking the new shaft; the lode here has a strong and masterly appearance, and will turn out about 1½ ton of ore per fathom. The stope of carbonate in west end of open-cut is not looking so well as for some months past. Not having stopped to clean our boilers since we resumed working in May, and to day and tomorrow being general holidays throughout the country, we have taken advantage of the opportunity to stop our engines to clean both boilers and put them in good order.—Returns for October: Dressed ore, 18 tons 43 per ton; carbonate, 12 tons; total, 30 tons.*

MENZENBERG.—R. Koskilly, Nov. 3:—*The 45 cross-cut, which is 47 fms. 2 ft. west of Dickin's shaft, is being extended in a splendid channel of ground. The rock, which consists of grauwacke and clay-slate, contains some beautiful spots of yellow copper ore and mundic; this end is presenting a most favourable appearance, and it is being pushed on with all possible speed in order to reach the main lode, which, looking at the mineralised character of the ground now at this point, no possible doubt can exist as to the result of the same when intersected in this cross-cut. No other change calling for remark throughout the mine.*

SALE OF ARSENIC.—At West Wheal Seton, on Tuesday, five parcels of arsenic were offered for sale by tender, and the whole lot was purchased by Mr. W. H. Rule at a great deal higher price than was offered by any of his competitors. It appears Mr. Rule, not content with reducing the price of coals, has now turned his attention to securing better prices for the produce of our mines, and the result of this sale of arsenic will clearly show that in this respect much good can be done. The following are the prices per ton submitted to the agents by the different companies:—

Cornwall Arsenic Company. Chem. Works. Rule.
No. 1 parcel £1 0 0 ... £1 10 0 ... £2 0 0 ... £2 15 0 ...
2 " 4 1 0 ... 4 0 0 ... 3 19 0 ... 5 15 3 ...
3 " 4 1 0 ... 4 0 0 ... 3 17 0 ... 5 15 3 ...
4 " 4 0 0 ... 4 0 0 ... 3 19 0 ... 5 10 0 ...
5 " 0 10 6 ... 0 15 6 ... 1 0 0 ... 3 5 0 ...
Cornish Telegraph.

CORNISH MINE SHARE MARKET.—Perhaps during the past week no phrase has been more frequently repeated than the now famous one of Capt. Josiah Thomas, that "tendering for Cornish mine supplies is a delusion and a snare." This view, and the question generally, is evidently one that will be freely debated, as Capt. Josiah's opinion is directly adverse to those so often expressed by John Taylor and Sons in their long experience in the management of Cornish mines, and by the Messrs. W. and A. Thomas, when they were the ruling powers at West Basset, South Carn Brea, Great South Tolgus, North Basset, and some others of the most extensive mines worked a few years since, and it is well known that their system of both buying and selling met with a cordial approval

Registration of New Companies.

The following joint-stock companies have been duly registered:

GLENGALE IRONWORKS (Limited).—Capital 10,000*l.*, in 20*s.* shares. To carry on business as engineers and boiler makers. The subscribers are—W. McGeorge, Belvedere, engineer, 50*s.*; T. Kennedy, Kilmarnock, engineer, 50*s.*; T. Keating, Kilmarnock, engineer, 50*s.*; J. Kennedy, 13, Brooklyn-road, Shepherd's Bush, 50*s.*; D. Massman, Tavistock-road, Notting Hill, artist, 25*s.*; D. Massman, jun., Tavistock-street, Notting Hill, clerk, 25*s.*; J. H. Halkett, 43, East India Avenue, engineer, 25*s.*; J. McNeil, 4, George-street, E. 1. This company is registered without Articles.

PENNANT BARTIES AND LEAD COMPANY (Limited).—Capital 30,000*l.*, in 5*s.* shares. To acquire mining rights in order to work for barytes, lead, and other minerals in the parish of Tremeliochion, near St. Asaph, Flint, according to the terms of an agreement made between W. Parry and J. Bartlett. The subscribers are—A. E. Cooke, Tankerville, Kingston-on-Thames, stock broker, 10*s.*; A. Cooper, 17, Church-street, Stoke Newington, wholesale stationer, 5*s.*; Beazley, 57, Tufnell Park-road, mining agent, 10*s.*; W. Brodie, Ballance-road, Hackney, clerk, 5*s.*; J. S. Eastes, St. John's Villa, Lordship-lane, ship broker, 5*s.*; R. Chandler, clerk, 6*s.*; Bishopsgate-street, solicitor; A. O. Cooper, 22, Beaumont square, Mile End. The remuneration for the directors is not to exceed 500*s.*

UNIVERSAL CARTRIDGE COMPANY (Limited).—Capital 150,000*l.*, in 5*s.* shares. To carry on the manufacture of cartridges, &c., at Dartford. The subscribers are—R. O. White, The Priory, Lewisham, 1*s.*; N. N. Cresswell, Osborn Lodge, near Isleworth; H. E. Bloxam, Burlington-grove, C. O. Wood, Spring Grove, Isleworth; Alfred Bloxam, Spring Grove; H. W. Smith, 40, Craven-street; H. R. Bird, 10, Moreland-street, Bristol.

SKELMERSDALE LAND AND BUILDING COMPANY (Limited).—Capital 20,000*l.*, in 5*s.* shares. To acquire a freehold estate at Skelmersdale, Lancashire. The subscribers (all of Southport) are—J. Barnes, 50*s.*; J. Marchbank, 50*s.*; J. Witham, 150*s.*; R. Banbury, 150*s.*; E. Iddon, 250*s.*; J. B. Squire, 50*s.*; and J. Mellings, 50*s.*

LAWTHER HEMATITE IRON COMPANY (Limited).—Capital 250,000*l.*, in 100*s.* shares. To acquire the mines and works in Cumberland belonging to the Lawther Hematite Iron Company, now in liquidation. The price to be paid is 75,000*l.* The subscribers (who take one share each) are—T. Stevens, Milton Ironworks, Glasgow, ironfounder; Alexander Ray, Glasgow, merchant; H. Stevens, Milton Ironworks, Glasgow, ironfounder; J. Stewart, 8, King-street, Manchester, banker; Gilbert Belth, Glasgow, merchant; D. G. Hoey, Workington, Cumberland, ironmaster. The directors are—Messrs. T. Stevens, Alexander Ray, Alfred Roberts, and D. G. Hoey, the latter to be managing director.

HIGHFIELD COLLIERIES COMPANY (Limited).—Capital 10,000*l.*, in 5*s.* shares. To acquire the right and title of Richard Cook, in the Lancashire and Stonegrave Collieries at Chesterfield. The subscribers are—W. Forrest, Chesterfield, 2*s.*; R. Cook, Sheffield, 1*s.*; H. Earl, mining engineer, 1*s.*; J. Lee, Chesterfield, 1*s.*; J. Orton, Newbold, colliery proprietor, 1*s.*; C. Street, Chesterfield, 2*s.*; W. Baldwin, Brampton, broker, 2*s.* The first directors are—Messrs. J. U. Askham, B. B. Noble, G. Orwin, and R. Cook, the qualification being the holding of shares to the nominal value of 500*s.*, and the remuneration being 100*s.* per annum.

TARRAPORE TEA COMPANY (Limited).—Capital 200,000*l.*, in 20*s.* shares. To acquire ten plantations in Assam. The subscribers are J. Fleming, 18, Leadenhall-street; R. J. Enright, 18, Leadenhall-street; D. Macneill, 7, Lothbury; G. P. Gunnis, Leekie, Stirling; W. Mackinnon, Glasgow; W. Haworth, 7, Lothbury; and W. Macneill, 18, Leadenhall-street.

ELLESMORE BUILDING AND INVESTMENT SOCIETY (Limited).—Capital 50,000*l.*, in 10*s.* shares. To carry on the general business of a land and investment society. The subscribers, who take 1 share each, are, B. Eldred, 37, Manchester-square; Bolton; W. Halsall, Bolton; H. Taylor, Bolton; W. A. Johnson, Bolton; T. Gregory, Little Hulton; W. Billings, Hulton; A. Aldred, 145, Bradford-street, Bolton.

CRAWSHAWBOOTH SPINNING COMPANY (Limited).—Capital 30,000*l.*, in 5*s.* shares. This is a Lancashire spinning company. The subscribers are, R. Hargraves, Accrington, 20*s.*; R. Clayton, Accrington, 10*s.*; J. Walmsley, Accrington, 20*s.*; J. Browne, Accrington, 20*s.*; T. Walmsley, Accrington, 20*s.*; D. Bell, Accrington, 20*s.*; and W. J. Holden, Accrington, 20*s.*

EAST SURREY HALL MUSEUM AND LIBRARY COMPANY (Limited).—Capital 7500*l.*, in 1*s.* shares. To establish a museum, &c., at Croydon, Surrey.

HUGHES AND KIMBER (Limited).—Capital 25,000*l.*, in 20*s.* shares. This is a conversion of the business of the firm of Messrs. Hughes and Kimber, printing and lithographic machine makers, &c.

BRITON LIFE ASSURANCE (Limited).—Capital 500,000*l.*, in 1*s.* shares, with power to increase to 1,000,000*l.* This is the first life assurance company registered as a joint stock company since the passing of Cave's Act. Its prospectus has been so extensively advertised that further particulars are unnecessary.

THE EMMA MINING COMPANY—ITS POSITION AND PROSPECTS.

The report to be presented at the forthcoming meeting of shareholders is an interesting one, since it embraces the directors' report on the present state of the company's affairs, the solicitor's report on the Commission from America, and the report of Mr. Geo. Attwood, general manager, who will attend the meeting. The shareholders are aware that the mine was seized by Mr. Park for moneys due as soon as legal proceedings were commenced against him, and has ever since been vested in the United States Marshall; but reports received from independent sources induce the directors to believe that the mine itself is, and has long been, utterly exhausted. The only available source of income that could have accrued to the company, and that only to a very limited extent, would have arisen from the concentration of the low-grade ore left from former workings. Under Mr. Park's attachment the whole of the machinery, plant, timber on surface, ore sacks, office furniture, &c., has been sold. Instructions have been sent out to pay off the Salt Lake establishment, and measures are in progress for a further reduction of expenses at the London office by the retirement of the secretary, &c. The case against the vendors is being vigorously proceeded with, and the case is now down for trial in the United States Circuit Court. The board have applied for the restitution of moneys received by certain of the original directors.

With regard to the position and prospects of the mine, Mr. G. Attwood's report shows that comparatively nothing has been done in the way of exploration, and that nothing has been discovered. The present condition of the mine is, he says, a most deplorable one; it will now be a most difficult as well as dangerous and expensive piece of work to mine what fillings, waste, and scrapings still remain. The Salt Lake office has been abolished, and the services of all employees connected with the same have been dispensed with. There are now only two men employed at the mine to watch over the shareholders' interests there. Mr. Attwood says, in conclusion, that his first report on the mine was made in March, 1873, and was an unfavourable one; that his second report was made in May, 1873, and was even more so; and that his third report made in April, 1874, was equally unfavourable. Since the last was written he has had 16 months further time to examine into the geology and stratigraphical features of Emma Hill with regard to the future prospects of the mine, and from his numerous careful observations on the subject he can only reiterate that the mine is virtually exhausted, and that their only hope for the future rests entirely on solving a geological problem which will take time, a large sum of money, and skilful engineering to solve.

PATENT PEAT SMELTING FUEL.—Mr. R. K. Aitchison (Redcar), writing to the *Engineer*, says—"A trial of the above fuel has just taken place under the direction of Mr. James Norie, at the Tees Foundry Works, Cargo Fleet. The basis of the fuel is, of course, peat, combined with chlorides of calcium and salt. The well-known affinity of these chemicals to phosphorus and sulphur has been amply proved in the trial of this fuel which has just taken place, the result being as follows:—The mixture of iron in the cupolas consisted of three-fourths No. 4 and one-fourth No. 3. In one cupola, as usual, coke only was used; in the other, a combination of half peat and half coke. Bars 3 ft. long, 2 in. wide, and 1 in. thick were cast from each of the cupolas. The coke iron stood about the usual test of 26 cwt. The peat and coke fuel combined drew 31½ cwt., and broke at 32 cwt., thus showing an improvement of 25 per cent. I am informed that this is a great test for Cleveland iron; yet, under more favourable circumstances as to manufacturing machinery, I feel morally certain I can reach a test of 35 cwt., if not more. The cost of the peat fuel is somewhat about the price of coke, and great facilities exist in the immediate neighbourhood of Middlesborough for the manufacture of the same. My object in addressing you is to obtain opinions as to the improvement—of course, if correct—effected by this fuel. Mr. Norie has further informed me that this fuel strengthens the iron, but does not harden it. This test should prove of the greatest importance, more especially as regards the Cleveland district, in the manufacture of malleable iron. In your number of the 15th inst., in speaking of my peat smelting fuel, your correspondent suggests that I use charcoal; such, however, is not the case. I use simply the peat from the bog, which is passed through a masticating machine, during which operation the chemicals are introduced, it is then air dried under sheds. The first cost, including all contingencies, is from 8s. to 10s. per ton."

REMOVAL OF GARVEL PARK LIGHTHOUSE.—Yesterday week the piles on which Garvel Park Lighthouse rested were blasted with dynamite, in order that they may be removed and the site dredged to make the navigable channel wider. The blasting operations were entrusted to the British Dynamite Company, and were carried through successfully. For fully a week past workmen were engaged making a bore about 20 ft. down into the river bed, and yesterday week the bore was filled with a charge of 130 lbs. of dynamite. A 12-minutes fuse was lighted, and the explosion which followed thoroughly shattered the foundation of the piles, so that they can now be extracted with much difficulty. The huge blast was witnessed by Mr. Henderson and Mr. Graham, chairman and secretary of the Cumbrae Lighthouse Trust; Mr. Kinipple and Capt. Millar, engineer and harbour-master to the Greenock Trust, and others.

Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—S. Toy, Nov. 3: Setting Report: No. 1 adit level to drive east, at 5*f.* per fm. for the month, and to clear all their stuff; the lode is 5 ft. wide, producing stones of lead, and looking kindly for further improvement. The roof of this level to stop by 4 men, at 6*f.* per cubic fathom for the month, and to clear all their stuff; the lode is worth 13*s.* per fm. for lead. We sold on Friday last 11 tons 8 cwt. 2 qrs. of lead ore.

BEDFORD UNITED.—William Phillips, Nov. 4: Operations at the engine-shaft are progressing favourably. In another month we hope to have a plunger-lift fixed at the 115*s.*, and to be in a position to set the men a bargain to put the shaft to a deeper level. The trip-halt under this level is completed, and a cross-cut put out from it to intersect the north part of the lode, which is worth at this point about 20*s.* per fathom. This speaks well for the mine on account of its being to the east of the very fine shoot of ore making down a few fathoms further west. The stopes in the back of the 115*s.* is worth 25*s.* per fathom. In the end being driven upon the north part of the lode from this level the lode is worth at present 8*f.* per fathom. In the 115*s.* the lode is 2½ ft. wide, producing saving work, and looking more promising. We are driving by the side of the north part of the lode from this level. In the back of this level, about 5 fms. west of the shaft, the lode continues to look exceedingly well, the point at present being stopped is worth 10*f.* per fathom. The ore as it is being broken is worth from 8*s.* to 10*s.* per ton. In the 105*s.* east the lode is very strong and promising, being 3 ft. wide, and at present worth 10*s.* per fathom. The stope in the bottom of this level is worth 15*s.* per fathom. The cross-cut is still being driven to intersect the north or main part of the lode from the 103 west. The winze sinking in this level is producing about 20*s.* worth of ore per fathom.

BOG.—W. T. Harris, J. Barkell, Nov. 3: Engine-shaft sinking below the 175*s.* is making fair progress, and without any particular alteration. The various bargains and pitches throughout the mine are much the same in prospects and in produce of lead ore and blonde as reported last week.

BRONFOYLD.—J. Davis, Nov. 4: To drive a cross-cut north from the 110*s.* to intersect the lode, to nine men for 20*s.*, including haulage of stuff to the 98*s.*. I expect to cut the lode here in course of eight or nine days, but we shall have about 4 fms. to drive afterwards before we reach the north wall. The bunch of ore upon which the No. 3 shaft is sunk dips westward, and at the 98*s.* the richest part of shoot is 10 fms. west of shaft; we shall, therefore, have to drive about 12 fms. west before we reach the corresponding point at the 110*s.* To stop above the 98*s.* to 22 men, at 7*f.* per cubic fathom; average value of the lode, 22*s.* 10*s.* per cubic fathom. To drive the 98*s.* westward, to four men, at 14*s.* per fathom, the lode here is about 4 fms. wide, and contains some fine branches of ore, but the bunch found in the 84*s.* west of Joshua's winze, is a few fathoms in advance of us yet. To stop above the 73*s.* to 10 men, at 7*f.* per fathom; average value of the lode, 15*s.* per cubic fathom. To drive a cross-cut south from the forepart of the 73*s.* (50 fms. east of No. 3 shaft), to four men, at 10*s.* per fathom, including removal of stuff. I think we are entering into a better channel of ground here. The north branch of the lode intersected since my last report contains carbonate of lime, mundic, and specks of lead ore, and is of a much improved appearance to what it is about 15 fms. back.

Middle Lode: To drive the 52*s.* west of Lloyd's cross-cut, to four men, at 14*s.* per fathom. There is a strong lode here, but it is not of much value for lead ore at present. To drive the 40*s.* east of shaft, to six men, at 18*s.* per fathom; value of the lode, 18*s.* per fathom. The machinery is in good order and in full work.

CAMDWRAYER AND DROSGOL (ROYAL).—J. Davis, Oct. 30: The cross-cut to the lode must be now approaching as it there is a tremendous stream of water issuing strongly tinged with red, which is a good sign. The men expect to get into the lode this month.

CARROLL.—J. Jennings, Nov. 3: We are progressing very satisfactorily in the sinking of Doctor's engine-shaft; the lode is 3 ft. wide, yielding stones of lead; I am anticipating a good improvement here when the south branch drops in with the lode, which will be in about 6 ft. more sinking. In the 11*s.* west the lode is 2½ ft. wide, yielding good stones of lead; the ground is more easy for driving, and water is freely issuing from the lode, which is a good indication. In the 11*s.* east, on the north part, there is no change in the lode since last reported on. In the 11*s.* east, on the south part, the killas is now of a more congenial character, and is easier for driving, and better progress is being made; the lode is 1 ft. wide, consisting chiefly of flookan and quartz, with occasionally spots of lead.

CRENNY AND WHEAL ABRAHAM UNITED.—Wm. Thomas, S. Arthur, Nov. 3: Sturt's Engine-Shaft: In the 22*s.* driving west, the lode is 5 ft. wide, and will yield 1½ ton of copper ore per fathom; the lode here has very much improved in the past week, and looks kindly to further improve.—St. George's Shaft: In the 21*s.* driving west, the lode is 5 ft. wide, and will yield 4 tons of copper ore per fathom.—Woolf's Shaft: In the shaft sinking below the 22*s.* the lode is 6 ft. wide, yielding some good copper ore; we anticipate an improvement here shortly. In the 22*s.* driving east, the lode is 3½ ft. wide, yielding 3 tons of copper ore per fathom.—Blewitt's Shaft: In the 23*s.* driving west, the lode is 4 ft. wide, composed of mundic, peach, and spar.—Richard's Shaft: In the 22*s.* driving west, the lode is 5 ft. wide, yielding 3 tons of copper ore per fm. In the 21*s.* driving west, the lode is 5 ft. wide, and will yield 1½ ton of copper ore per fathom. We have communicated the winze sinking below the 200 to the 210, and have put the men to sink in the bottom of this level, where the lode is 4½ ft. wide, and will produce 2 tons of copper ore per fathom. In the 200, driving west, the lode is 2½ ft. wide, occasionally yielding stones of copper ore.

CWM ELAN (NEW).—W. Goldsworthy, Oct. 30: In the 30*s.* west of shaft, the lode is 18 in. wide, composed of capel, lead, and blonde ores, of the latter two worth 15 cwt. per fathom; there is a strong feed of water coming from this end. In the same level, east of shaft, the lode will produce 11 cwt. of lead and blonde ores per fathom. No. 1 stop, in the back of the 20*s.* will produce 12 cwt. of lead and blonde ores per fathom. The same level, east of shaft, on the south lode, we produce 10 cwt. of lead per fathom. The stop in the back of the 20*s.* west of the cross-course, is yielding 16 cwt. of lead ore per fathom. The same level, east of the cross-course, is yielding 16 cwt. of lead ore per fathom. We are driving on with all speed for the next parcel of lead, hoping you received the sample thereof in due time.

CWM TUDOR.—Isaac Williams, Oct. 30: There is a great improvement in the forepart of the adit going west towards Cwmbyr, and I am in hopes of cutting lead every day.

DE BROKE.—T. Hodge and Son, Nov. 1: Wilson's shaft is below the 25 about 4 fms. 2 ft., going down in a beautiful mineralised shaly rock. We calculate to strike the lode in another 7 fms. sinking, which will occupy (say) three months; and, judging from the favourable character of the rock, as well as the lode gone down in bottom of the 25, we feel sanguine that the vein will be found highly productive at the next level. The 25 is extended west from Wilson's about 8 fms., at which point we are cutting through the lode to prove its value; so far as seen, the vein is showing a very good appearance, composed of quartz, lime, mundic, and rich stones of yellow copper and lead ore—dressing work. The stop in back of the 25, west of the junction, is worth 10*s.* per fathom; the said stop is about 4 fms. above the back of the level, leaving 20 fms. of backs entire. The ore ground goes down in bottom of the level, under the said stop, is about 9 fms. long, worth on an average nearly 30*s.* per fathom—a fine lode. The stop in bottom of the adit level, east of trial winze, is worth 9*s.* per fathom; this stop is getting nearly exhausted. The machinery is in good order, and working well. At surface our dressing-floors are for the time completed, good sheds over the same, and the walls of the ore bin are up ready to receive rock.

DENBIGHSHIRE.—J. Pryor, Nov. 4: The engine is now working only half-time, and the water is kept under with great ease, which must be satisfactory, considering the heavy floods we have had of late. The 112 west lode is about 2 ft. wide; there is a sound in the driving which makes me confident that an alteration is at hand, and that the same will be the intersection of the run of ore left at Parry's. The north cross-cut out of this level shows no change. The 112 east is, in my opinion, changing favourably, and I hope soon to be able to report our having met with one of the courses found in the shallow workings above us. The machinery is working well, and all operations are being carried on in a satisfactory manner.

DEVON GREAT CONSOLS.—Nov. 5: There is nothing new to report this week, except that 1371 tons of ore were sampled the 29th ult., for sale next Thursday week, the 18th instant.

DUBBY SYKE.—Wm. Tallentire, Oct. 29: Dubby Syke Level: The men are making good progress in opening out the level eastward; it is still crushed close. There is nothing new in the Shopping Box level. We are driving across the corner to the vein. The ground is rather stiff, but not far through. We have almost got the blacksmith's shop wall up, and have covered a few more yards of the new road with cuttings.

DYLIFFE.—Edward Rogers, Nov. 3: Dyliffe Lode: In the 120*s.* driving east of boundary shaft, no lode has been broken during the past week; when last taken down it was worth 18*s.* per fm. In the 25*s.* end, driving east of old engine-shaft, the lode is 2 ft. wide, worth 7*s.* per fathom. The lode in the 15*s.* end, east of this shaft, being very wide, shall not cut it until the level is driven about 4 or 5 fms. further in this direction.—Enganglaid Lode: The winze in bottom of the 25*s.* is communicating to the level below. In the 45*s.* west of the shaft, we have commenced to cross-cut into the lode. A setting report shall

* With this week's Journal a SUPPLEMENTAL SHEET is given, which contains—Original Correspondence: The Mines and Mining Districts of Utah (B. A. M. Froelich); the Great Fire in Virginia City; Cape Copper Company; On Mining in Tasmania (John Hunt); Imperial Brazilian Collieries; South Aurora Consolidated Company; Richmond Consolidated Mining Company; Foreign Mines and English Capital; Dynamite and Gunpowder; The Invention of the Safety-Lamp; Coal Mining in Scotland; Circular Ironclads; The Dowsing Rod; Gold in Wales (T. A. Readwin); Separation of Blende from Lead; Lead Mining in Flintshire; West Maria and Fortescue Mines; Cornish Mining—West Godolphin; Cornish Mining; East Caradon Mine. Mine Reports: Wheal Wrey, Ludecott, and North Trelawny Mines. Meetings of Public Companies: United Mexican, Imperial Brazilian, Santa Barbara Gold, Jayali, Rockhope Valley, West Maria and Fortescue Consols, North Hendre, Willoughby—The Channel Steam Ferry—Foreign Mining and Metallurgy—Coal-Cutting Machinery—Spontaneous Combustion of Coal—Patent Matters, &c.

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, NOV. 5, 1875.

	COPPER.	IRON.
	£ s. d.	£ s. d.
Best selected... p. ton	92 0 0	7 15 0
Tough cake and tile.	89 0 0	7 17 6
Sheathing & sheets...	96 0 0	8 5 0
Bolts	98 0 0	9 0 0
Bottoms	99 0 0	9 0 0
Old...	80 0 0	10 0 0
Australian, Wallaroo	92 10 0	93 10 0
ditto other brands	89 0 0	9 0 0
Chill bars, g.o.b.	81 10 0	83 0 0
Wire ... per lb.	0 0 11 3/4	0 0 11 3/4
Tubes...	0 1 0 1/4	0 1 0 1/4
BRASS.	per lb.	
Sheets...	9d.-10d.	
Wire	9 1/2 d.	
Tubes	9 1/2 d.-11 1/4 d.	
Yellow metal sheathing	7 1/2 d.-8 1/4 d.	
Sheets	7 1/2 d.-	
SPelter.	per ton.	
Foreign on the spot.	24 15 0	25 0 0
" to arrive ...	24 10 0	24 15 0
ZINC.		
In sheets	31 10 0	31 15 0
TIN.		
English blocks ... £ 88 0 0	—	
Do., bars (in brls.)	90 0 0	—
Do., refined	90 0 0	—
Bancos...	90 0 0	91 0 0
Straits	84 0 0	84 10 0
Australian	81 10 0	82 0 0
TIN-PLATE.	per box.	
IC Charcoal, 1st qua.	£ 21 10 0	11 1 0
IX Do., 1st quality	1 16 0	1 17 0
IC Do., 2d quality	1 5 6	1 8 0
IX Do., 2d quality	1 11 6	1 14 0
IC Coke	1 1 0	1 3 0
IX Ditto	1 7 0	1 9 0
Canada plates, p. ton...	14 10 0	15 0 0
Ditto, at works	14 0 0	15 0 0
QUICKSILVER (p. bot.)	10 0	0 0
* At the works, 1s. to 1s. 6d. per ton less.		+ Add 6s. for each X.
Terne-plates 2s. per box below tin-plates of similar brand.		

* At the works, 1s. to 1s. 6d. per ton less.

+ Add 6s. for each X.

REMARKS.—The state of the Metal Market generally is unfavourable, both in regard to the extent of business transacted and the tendency of prices, and it is perfectly evident that before any thorough and permanent resuscitation in trade takes place a long pause must elapse. The depreciation in quotations is one of the most telling indications of diminished trade, especially so just now, as there is almost a total absence of speculation; and as there is really nothing immediately in prospect to lead to the expectation of better times, lower prices must necessarily follow. The shipping season to the Northern ports is fast drawing to a close, and we shall shortly enter upon the dullest quarter of the year. The advices from abroad are very discouraging, and the commerce of the whole world seems out of joint. North America is only very gradually recovering from the crisis of 1873; all the principal cities of South America are financially bad; the Indian markets are unremunerative; and Australia has just passed through one of the worst seasons experienced for many years past. But, to look nearer home, take Egypt, Turkey, Spain, Germany, and Russia, they are all suffering more or less from trade and loss of credit. It will, therefore, doubtless take a long time before confidence can be restored and prosperity regained. All new undertakings of any magnitude, in the meantime, must be suspended, and even works in progress will be greatly retarded; with decreasing demand lower prices must prevail, and labour must also become cheaper. The only way to stimulate consumption is to make things cheap, and a low scale of prices at the present time would do more than anything else to bring back the demand. The money market is stiffening, and, although the requirements for business purposes are comparatively limited, yet, if the rate should be greatly advanced, it will naturally tend to create increased pressure, and prolong the depression of our markets.

COPPER.—The price of Chili bars does not vary much, and the rate has been particularly uniform for a considerable time past, the extent of the fluctuation being only about 1d. per ton. Our market keeps quiet, and although sellers do not press sales, buyers, on the other hand, limit their dealings to immediate requirements. Speculation has almost entirely subsided, and the market is left to take its own course, and is governed strictly by supply and demand. The charters for the last fortnight in October are 1900 tons. In English some further attempts are being made to revive the old association of smelters, for the purpose of combining together to make prices more remunerative; but this renewed effort will probably share the same fate in a short time as similar arrangements on all previous occasions, and fall to the ground without resulting in any benefit to anybody. Trade combinations are generally understood to be bad in principle, and do not work satisfactorily. It is surely far better to be free from all restrictions than to be bound down to certain fixed conditions, which all former experience proves will certainly hereafter be broken or evaded when it no longer answers to abide by them.

IRON.—The condition of our market has not undergone any change. As yet there is no relief to the monotony that has characterised it for so long a time past, and there is little in prospect at present to warrant the expectation of a speedy revival in the demand. The downward course of the market continues to make further progress, and to all appearances the minimum has not yet been reached. With the exception of slight fluctuations in pigs, and a trifling rally lately in the price of Welsh merchant bars, the downward tendency has been uninterrupted. It was thought ere this that business would have recovered, for instead of any visible signs of improvement, the state of our market is even worse than before. The long period of depression is becoming most exhaustive, and proving a severe strain upon the resources of ironmasters; no doubt many of the smaller houses will have to succumb, and close their works entirely until better times return. For rails there is very little enquiry, and prices are somewhat lower. From second-hands they have been offered as low as 6s. 15d., but even at this figure but few sales can be effected. In Welsh bars a fair amount of work is being turned out, and the makers of best bars are holding for better prices. In one or two instances they are pretty well supplied with orders for the next few weeks, at the same time it is very doubtful whether they will be able to realise the improved rates that they are holding for, as North of England iron is cheaper, and it is impossible, while that is the case, for the Welsh houses to gain much advantage; besides, the makers in Wales of the common brands cannot obtain orders freely, and therefore any advance in the better descriptions will probably be only temporary.

In Staffordshire the makers seem a little undecided what to do; several of them are quoting more than before, not because there is any improvement in the demand, but simply on account of the announcement a short time since of a rise of 2s. per ton in coals. There are others, however, who are more urgently in want of orders, have made liberal concessions to secure them. Under these circumstances, therefore, it is not likely that an advance can be maintained, more particularly at this time of the year, when business invariably becomes more contracted. In Swedish bars, sales of Indian specification have changed hands at 15s., but the market is not active at this price. Scotch pigs have gained a little higher position; since last Friday, when the price was 6s. 9d., they have reached 6s. 10d., and to-day's price is 6s. 6d., m.n. cash.

SHIPMENTS.

Tons 14,056

Week ending Oct. 30, 1875.....

11,366

Decrease 2,690

Total increase for 1875 83,776

The shipments this year compare favourably with last year, but as stocks have increased, and will probably be added to, the statistical position is not so good.

LEAD.—The market is dull, and as Spanish pig can be obtained more freely at lower prices, sellers of English have reduced their quotations.

At present there is no perceptible improvement in the demand on account of this concession, and it would seem that a further diminution in value must ensue before any improvement will take place, as the condition of the shipping trade is unsatisfactory.

Considering the depreciation still ruling in the prices of most metals, it is rather remarkable that lead has continued so long to occupy so good a position.

Holders have doubtless done tolerably well in comparison with others, and should now be careful to avoid upholding prices longer than the market will bear, and prevent, if possible, the mistake which so many sellers often fall into—that of allowing trifling difference in prices to form an impediment to business.

QUICKSILVER.—This metal for some time past has occupied a doubtful position, and prices have taken a downward tendency.

Holders appear to have no confidence in the future stability of the market, and it would, therefore, be surprising if buyers displayed any eagerness to avail themselves of the present reduced rate.

The shipments to the East have been in sufficient quantities to meet the demand, and the only orders now coming forward are comparatively small, and at much lower limits, principally between 9s. and 10s. per bottle.

Under these circumstances it is not improbable that sellers will have to make further concessions

to create an improved enquiry, and until then the market must remain dull and drooping. Second-hand parcels have been offering at 11s. per bottle, but this price meets with little or no response from the other side: 10s. has just been accepted from importers.

TIN.—All the week the market has assumed a quiet appearance, and the amount of business transacted has been of a limited character. To effect sales, sellers have had to submit to lower rates. Consumers continue to buy only from hand to mouth, and speculators are more disposed to operate for a fall. Straits for forward delivery has been sold below cash prices. The state of the market seems to favour a downward movement, and it is not improbable that lower prices will soon follow. The deliveries and arrivals for the last month about balance, so that the stock remains undisturbed. There are various reasons that combine at the fall of the season to render that period of the year more susceptible to a fall; and particularly this year, as the depression in trade may rather increase than otherwise. As the year draws to a close holders generally like to clear off their obligations, and consumers do not wish to increase their stock.

THE IRON TRADE (Griffith's Weekly Report).—Friday Evening.

There have been moderate fluctuations in the market for Scotch pigs this week, which closes this afternoon at 6s. 6d. buyers, being exactly 1s. more than the closing price this afternoon. We quote makers No. I iron as follows:—Gartsherrie, 72s. 6d.; Coltness, 7s.; Calder, 75s.; Langloan, 75s.; Summerlee, 70s.; Monkland, 6s. f.o.b. Glasgow; Glengarnock, 69s. 6d.; Eglington, 6s. 6d. f.o.b. Ardrossan; Shotts, 7s. f.o.b. Leith; Kenniel, 6s. f.o.b. Bo'ness. We have no change to report in our market this week. The demand and fresh business done is general in Yorkshire and Staffordshire iron of the best quality. The demand keeps up for Welsh bars of known good quality. The Blaenavon, and the Llwyn Tondu and Ogmore being in improved request; one of these firms are very well off for orders, although the rail trade is very stagnant, the Ebbw Vale Company have sufficient orders on their books to keep the mills running, and the Rhymney Company have this week an order for 4000 tons of rails for the Italian Government; with these exceptions the trade in Wales is very quiet, and not satisfactory for the masters. There is no change to notice in the tin-plate trade in the Principality. Orders are by no means brisk, but the makers intend one and all to abide by the firm determination expressed at the Gloucester Quarter day to reduce the make, and if necessary close some of the mills and pots to avoid working at a loss. The makers of hematite pigs on the West Coast are in a slightly improved position. The stocks by the late spurt at Millom and Carnforth have been considerably reduced, and heavy sales have been made by some of the smelters in this district into the beginning of next year. The West Cumberland Iron Mining and Smelting Company have eight blast-furnaces, five now in blast, and will blow another furnace in 14 days. The stocks at Barrow are considerably reduced.

In Shropshire the trade is brisk in sheet iron. This is the only kind which can be said to be in active demand here. The works in North and South Staffordshire are moderately employed. Marked bars remain unchanged, perhaps firmer in price. Second-class iron in the South, owing to the advance of coal, is from 5s. to 10s. per ton dearer, and most of these makers have orders to keep the works running four or five days a week. Possibly only the houses who have been selling at very low rates will obtain the advanced price above referred to. Anyhow, the enhanced price of coal increases the cost of production in South Staffordshire all round. It was reported on 'Change at Birmingham yesterday that the Staffordshire sheet-iron makers held a meeting during 'Change hours and resolved to advance the price of sheet-iron 10s. per ton. We have had no official notice of this change yet. The sheet-iron makers in Staffordshire are all busy, and we should think this advance very probable. The advance in coal has placed the smelters in South Staffordshire in a very awkward position. They are now compelled to advance the price of native pig-iron from 5s. to 10s. a ton. There has been no official circular issued, but the smelters must either do this or blow out some of the furnaces. The Lilleshill Company have made no change in their price. The market for Scotch pigs has improved little this week. The Middlesborough market on Tuesday was weaker; prices down 1s. per ton.

THE COPPER TRADE.

Stocks in Europe:—	
Chili ores and regulus, Liverpool	Tons 441
Chili bars in Liverpool	9,930
Ditto Swanso	1,641
Chili ingots in Liverpool	423
Ditto Swanso	—
Foreign copper (chiefly Australian) in London	7,979
English copper in London	50
Chili bars and Barilla in Havre	2,725
Other copper in Havre	375 = 23,564
Afloat and chartered from Chili to Europe (advised by mail):—	
Ores and regulus (equal to fine)	5,274
Bars and ingots	4,527 = 9,801
Afloat from Australia (advised by mail):—	
Fine copper	1,010
Afloat and chartered from Chili to Europe (advised by cable):—	
Fine copper	2,900
Total	Tons 37,275
Leadenhall-street, Nov. 1.	

HENRY R. MERTON AND CO.

Since our last report English consumers of Chili bars have but sparingly supplied themselves, and the continental demand has been almost nil, owing to the fact that manufacturers there have supplied their requirements from imports direct from Chili, prices have, however, been fairly maintained, and there is little change to notice in our quotations of a fortnight ago. Arrival here (Liverpool) during the fortnight of West Coast, S.A., produce have been—Sortas, from Valparaiso, 334 tons bars; and 280 tons ingots: Prince Arthur, from Valparaiso, 15 tons bars; Noreman, from Valparaiso, 64 tons bars; Wood Hall, from Valparaiso, 20 tons bars; Dandond, from Valparaiso, 22 tons bars; Corcovado, from Valparaiso, 666 tons bars.—At Swansea: Atossa, 710 tons regulus. Stocks of copper (Chilian and Bolivian) in first and second hands, likely to be available, we estimate at:—Ores. Regulus. Bars. Ingots. Barilla. Swansea — 9,930 423 — — — Total 979 11,571 423 — — — Tons 37,275 Leadenhall-street, Nov. 1.

Ladywell, 24 to 25; in the stope in the 16 north the lode is worth 25s. per fathom; in the adit, south of shaft, the lode is worth 20s. per fathom. Wheal Agar shares have improved to 2s. 3s. Among the heavy tin mines Carn Brea are rather better at 50 to 52; Dolcoath, 44 to 46; Tincroft, 23 to 25; Cook's Kitchen, 7 to 7½; Devon Great Consols have advanced to 4, 4½; Marke Valley shares are better at 3 to 3½; East Caradon, 1½ to 2; East Pool, 15 to 16; East Van, 1½ to 1¾; Great Laxey, 16 to 16½; Great Wheal Vor shares have improved little this week. The middlings are weaker; prices down 1s. per ton less.

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worked to a depth of 40 fathoms, when overcome by water." Until the mine had been unwatered, which could not be done until the necessary appliances had been obtained from San Juan, Mr. Coward could not forward a detailed report. From Aug. 27 to Oct. 2 he busied himself in this work, the result of which has been the announcement that the vein has gone down in the sole of the bottom level of an average value of 2½ ozs. of gold per ton, that Mr. Coward had himself raised and stamped a sufficient quantity to be satisfied that such will be the practical result in working, that returns can be made at an expense not exceeding 30s. per ton, and that the erected machinery as soon as put in order is capable of reducing no less than 1000 tons per month; 189 tons (from the bottom of the mine) have yielded 486 ozs. of gold, which realised 37. 10s. per oz.: the market closes 5½ to 5½.

Foreign Gold Quartz Shares remain steady, with a tendency towards higher prices in the more popular stocks. St. John del Rey have improved to 395, 405; the return for the second division of October (11 days) being 20,000 oits., yield 8·9 oits. per ton value 7750·; this is a good improvement on the first division of the month, and if the remaining 11 days of the month give a similar result, the aggregate produce for the month will be 55,000 oits., which should leave a profit of about 14,000·. The dividend at Christmas, it is reported, will be 25 per cent., or at the rate of 50 per cent. per annum. All the stamps are in full work, and are being adequately supplied with rock free from killas. Don Pedro, 2½ to 3; and more enquired for; Chontales, 2½ to 3; Javali, 9-16ths to 11-16ths; Frontino and Bolivia, 1½ to 1½; Almada and Trito, 2½ to 3½; Sierra Buttes, 1½ to 1½; do. Plumas Eureka, 1½ to 1½; London and California, 2½ to 3; Independence, 2½ to 3; Port Phillip, 2½ to 3.

Silver mines have been depressed, in sympathy with the heavy decline in Richmond shares; a further fall has taken place during the week of 1½ ds. per share, the lowest quotation was 6½ to 6½, but after several fluctuations a rally took place, and the closing price was 6½ to 6½. Cablegram received: "Week's run, \$41,000; re-lining. Nothing new in mine. Sinking shaft." The make of bullion for the season is \$1,112,000, and since February \$1,331,000. The refinery this season has produced gold and silver bars to the value of \$765,000, irrespective of the lead. The timbering in the main hoisting shaft being completed, sinking in that is again resumed, and a depth of 800 ft. is nearly attained. The drift from this shaft at the 700 ft. level started to intersect the main lode, has it appears struck good ore earlier than was expected, which appears to be of the character of a string, probably from the lode or some chamber in connection with it. As the cablegram in our last week's Journal announced that the "700 ft. drift was looking well," the opinion as to this discovery announced in the manager's letter appears to be well grounded. The winze below the 600 level is being sunk outside the lode, in order to obtain better ventilation, and the cabled news on the 21st was that a drift from this winze at 50 below the 600 level had struck ore. The new hauling-engine will shortly be fixed, and a power at command of hauling from 2000 ft. This extra power has been needed sooner than was expected, and until it is applied the ore in the lowest workings is not accessible for use, neither can the extent of the new reserves below the 600 level be ascertained, as no drifts or cross-cuts could be run till the hauling power is increased. Eberhardt and Aurora, 8 to 8½; the directors announce that the first shipment of bar silver, value 7500·, is to hand.

United Mexican, 2½ to 3; at the meeting, on Wednesday, reported in another column, it appeared that during the past financial half-year the excess of outlay on the old concern had been \$15,484, reduced by payments of \$3319 by the original owners to \$12,165 on account of the company. The latest advices state that the vein in the "new concern" was looking a little better; some assays gave 3 mares, but the average was not so high; the vein was well-packed, and looked more favourable. Emma, 1½ to 1½; the reports, to be submitted at the meeting, on Wednesday, are referred to in another column. Flagstaff, 11-16ths to 13-16ths; Last Chance, 2½ to 3.

TANKERVILLE.—The directors have declared a quarterly dividend of 5s. per share (3000·), payable on the 19th inst. The mine is looking exceedingly well. The winze below the 152, 17 fms. west of shaft, is down 6 fms.—all the way in a rich lode, which in the next level (the 162) it is estimated will be found 16 to 18 ft. wide. In the roof of the 152, directly over this winze, the lode is worth 200· per fathom.

WEST CHIVERTON.—In another column will be found the details of sales of ore made during the past month, and realising upwards of 2800·, of which 1646· 15s. was from lead ores, and 1218· from blends. This will leave profit for the month of about 1200·, and it could be wished that many other mines upon the market could show equally gratifying results.

HYDRAULIC GOLD MINES have been dealt in to a moderate extent. Sweetland Creek, 2½ to 3½; Mr. G. D. McLean reports that he is washing with all the water he can command. The supply as yet has not much slackened, and may possibly continue without much decrease until the rains set in. Cedar Creek, 2½ to 3½; the superintendent has ceased all work except the Yankee Tunnel, which he is running ahead with as much speed as possible, but at present the progress is slow, owing to a short supply of water to work the machinery. Birdseye Creek, 1½ to 1½; the agent is pushing on with the work required to be in readiness for water, and is looking forward to a good season. Oregon (pref.), 4 to 4½; capital progress is being made in the tunnel and ditches, and the whole will, it is expected, be completed early this month. The superintendent says that he intends to start the coming season with three monitors, and is confident that the results will satisfy all the shareholders. Blue Tent, 4½ to 5; the remaining work, such as the distributing reservoir, &c., is being rapidly completed, and matters are assuming good shape for the coming season.

Lead Mines have been active, and a large business recorded. Van, 2½ to 2½; the 60 fm. level west is improving, and the ore ground is lengthening considerably as depth is attained. The 75 west maintains its value—90· per cubic fathom. The 90 west is worth 80· per cubic fathom, and the same level east 50·. No other alteration. The usual quantity of ore will be sampled next week. Pateley Bridge shares continue firm at 6½ to 6½; the lode in the 20 cross-cut west fully maintains its value of 80· per fathom, and the manager is of opinion it will still further improve. Attention has been already directed to the fact that the eastern part of the mine is drained 60 fathoms below the present workings, and that the lodes have gone down rich in this portion of the mine. The rails will be completely laid during the next month, when, after many years suspension, the driving of this level will be resumed. The mine generally continues to look well. Port Nigel, 1½ to 1½; the mine is opening out in a most satisfactory manner, and all that is required is to provide dressing machinery adequate to the present output; the monthly return of 40 tons will then be increased to 70 or 80 tons. A parcel of 65 tons has been shipped this week.

Grogwinion, 3 to 3½; the main shaft, which been several years sinking, is now within 10 fms. of completion, and when finished will enable the executive to increase the returns to probably 100 tons of lead per month. The intermediate level has improved; this month's sale of 70 tons realised 14· 13s. per ton. Wye Valley, 4 to 5; the 22, driving towards the rich ore ground in the 10, is yielding lead with a promising lode; discoveries are shortly expected at this point; 40 tons of lead will be sampled to-day. West Wye Valley, 3 to 3½; the works are being pushed forward vigorously. The purchase has been completed, and the shares allotted. West Goginan, 1½ to 2; Llanidloes Lead, 3 to 3½; ore is now being raised on tribute at 6· per ton, which will leave a good profit. Melindur Valley, 1½ to 2; the lode at the main shaft and 26 fm. level continues to improve. South Cwmystwyth 1½ to 2; lead is being raised. The ground is rather hard, and progress, consequently, comparatively slow. Bog, 5-16ths to 7-16ths; the sinking of the engine-shaft below the 175 is making fair progress. There is no change of importance at the mine. Pennerley, 1½ to 1½; the lode in the 120 west is considerably improved, and apparently just entering a run of ore ground. The end is worth 1 ton of lead per fathom. At Potter's Pit the sinking of the shaft below the 75 is steadily proceeding. The value of the winzes remains as last reported. The company have this week sampled 80 tons of lead and 15 tons blends.

New Quebrada, 3½ to 3½; the report to be submitted at the forthcoming meeting states that since last meeting the directors have kept steadily in view two great aims—the development of the mines, and completion of the railway works—and they have not failed strongly to impress upon the Bolivar Railway Company the great importance of the fulfilment of the latter object. The latest accounts from Venezuela in both these respects are favourable; and the contractors are assured that the locomotives would reach Yarara, 35 miles from the sea coast, by the end of last month. The earthworks to La Luz (within five miles of the mines) it was expected would be completed by the same time. The superintendent at the mines expresses confidence that he will be able, without difficulty, to supply at the proper time the quantity of ore required for fulfilment of the company's contract with the railway company.

The result of the many assays of the ore made from time to time justifies the opinions formerly expressed as to the quality of the mineral.

Great Wheal Vor, 2½ to 3½; the lode in the shaft has been slightly disordered by a string of quartz coming in from the north wall of the shaft; but the latest information is to the effect that the quartz is wearing out and the lode resuming its former character. The 40 and 70 maintain former reported value.

Subjoined are the closing quotations:—

Asheton, ½ to 1½; Bog, 5-16ths to 7-16ths; Carn Brea, 50 to 52; Devon Great Consols, 3½ to 4½; Dolcoath, 44 to 46; East Caradon, 1½ to 2; East Lovell, 6 to 7; East Van, 1½ to 1½; Exchequer Gold, ½ to ½; Great Laxey, 15½ to 16½; Great Wheal Vor, 2½ to 3½; Hindston Down Consols, ½ to 1½; Marke Vale, 15½ to 16½; Pateley Bridge, 6½ to 6½; Parva Mountain, ½ to ½; Pennerley, 1½ to 1½; Penstruthal, ½ to ½; Roman Gravels, 12½ to 12½; Tankerville, 10½ to 11½; Tinorof, 23 to 25; Van, 27½ to 28½ (ex div.); Van Consols, 1½ to 1½; West Bassett, 5 to 5½; West Chiverton, 17½ to 17½; West Egges, 1½ to 1½; West Tankerville, 1½ to 1½; Wheal Grenville, ½ to ½; Birdseye Creek, 1½ to 1½; Blue Tent, 4½ to 5; Cape Copper, 34 to 35; Cedar Creek, ½ to ½; Eberhardt and Aurora, 8 to 8½; Emma, 1½ to 1½; Flagstaff, 11-16ths to 13-16ths; Last Chance, ½ to ½; Malabar, 14 to 14½; New Quebrada, 3½ to 3½; Oregon (pref.) 4 to 4½; Rica, ½ to ½; Richmond Consolidated, 6½ to 6½; St. John del Rey, 395 to 405; San Pedro, 1½ to 1½; South Aurora, 6s. to 8s.; Sweetland Creek, 2½ to 2½; Tecoma, ½ to ½; United Mexican, 2½ to 3.

HALIFAX SHARE MARKET.—Thursday: The following quotations are from Mr. J. H. Thackrah's list:—Halifax and Huddersfield Union Bank, 30; Halifax Joint-Stock Bank, 28; Halifax Commercial Bank, 24½; London and Yorkshire Bank, 33s. 6d.; John Crossley's, 13½; Whitworth and Co., 9; Elland Gas, 20; Rastick Gas, 18½; Bradford Brick and Tile, A, 24; B, 7½; Charlestow Brick and Tile, 9½; Ripponden Commercial, 12½; Hebden Bridge Cotton, 10; Yorkshire Boiler Insurance Company, 21s.; Norton Brothers, 9½.

At Redruth Ticketing, on Thursday, 2201 tons of copper ore were sold, realising 11,483· 8s. 0d. The particulars of the sale were—Average standard, 113· 12s.; average produce, 7; average price per ton, 5½ ds. 6d.; quantity of fine copper, 154 tons 8 cwts. The following are the particulars:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Oct. 7.	1483	£115 11 0	6½	£5 0 6	14s. 9d.	0 273 14 0
21.	2225	115 1 0	6½	5 2 6	15 0	74 17 6
Nov. 4.	2301	113 12 0	7	5 4 6	14 10 ½	74 8 0

Compared with the last sale, the advance has been in the standard 5s., and in the price per ton of ore about 6s. 8d.

The THERMO-ELECTRIC GENERATOR COMPANY have now completed the necessary arrangements for showing their improved thermometric piles in regular operation in London; and as the pile has already given the greatest satisfaction wherever applied, its extensive adoption may be looked forward to. Mr. Diamond's discovery, the result of years of experiment and labour, by which he has been able to perfect his thermo-electric pile, appears to solve the problem of producing cheap electricity on practical scale. The Diamond pile is constructed of metals having great electric properties. The electricity is given out without any intermediate agency. Fuel alone, such as gas, coke, charcoal, is consumed. The economy in maintenance is very considerable in comparison with other batteries, and the current obtained is constant, and free from polarisation or exhaustion. The superiority of the Diamond pile over other batteries for electroplating and electrolyzing purposes has been practically demonstrated by its adoption in France in the Ministry of War, the Mint, the Bank of France, School of Mines, &c.; in the ateliers of Messrs. Goupiol, Christophe, and other industrial institutions; whilst its value and economy in telegraphy have been placed beyond question by the result of many months' working at the Exchange Telegraph Company's office in Bartholomew House, where the pile has superseded all other batteries previously in use. The invention will be more fully referred to on a future occasion.

TANKERVILLE.—The directors have declared a quarterly dividend of 5s. per share (3000·), payable on the 19th inst. The mine is looking exceedingly well. The winze below the 152, 17 fms. west of shaft, is down 6 fms.—all the way in a rich lode, which in the next level (the 162) it is estimated will be found 16 to 18 ft. wide. In the roof of the 152, directly over this winze, the lode is worth 200· per fathom.

WEST CHIVERTON.—In another column will be found the details of sales of ore made during the past month, and realising upwards of 2800·, of which 1646· 15s. was from lead ores, and 1218· from blends. This will leave profit for the month of about 1200·, and it could be wished that many other mines upon the market could show equally gratifying results.

BLACK ROCK COLLIERY.—The works are being pushed on with all speed, with a view to enlarging the output as quickly as possible, and it is anticipated the quantity raised per week will be doubled in the course of another three months. With so many advantages as this colliery possesses in situation as to market, quality of coal, &c., the company should do well, and with the probability of a speedy rise in the price of coal the shares should advance in value.

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MESSRS. F. W. MANSELL AND CO. (SWORN BROKERS) are in a position to afford the LATEST INFORMATION from these VALUABLE MINES, and strongly recommend the immediate PURCHASE of the SHARES. BLUE TENT, OREGON, RICHMOND, EBERHARDT, ARGENTINE GOLD. See page 1219 in to day's Journal.

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A N ENGAGEMENT WANTED, by a Young Gentleman (aged 25), in some ENGINEERING or SCIENTIFIC EMPLOYMENT. The advertiser has had experience in the shop and drawing office, and management of men, also a knowledge of surveying and mechanics. Address, "Wray," MINING JOURNAL Office, 26, Fleet street, London.

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Apply, stating full particulars, to the Company's Offices, 2, Copthall Buildings, E.C.

WANTED TO PURCHASE, a FEW SHARES in the SWANSEA COLLIERIES COMPANY (LIMITED), and the YNSCEDDWYN COLLIERY COMPANY (LIMITED), or any other SWANSEA COLLIERIES or IRONWORKS.—Quote lowest price and number to "J. V. Y." 51, Shardeles-road, New Cross, S.E.

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WANTED TO PURCHASE, in small or large quantities, up to 2000 tons. State strength, and lowest price delivered on rail or board of ship, to W. BOUSTROE, Barytes Manufacturer, Yockleton, Salop.

WANTED, £5000 for HALF of SLATE QUARRY, in GOOD WORK. Cleared 50 per cent. last year; quality good. London orders to June booked; been at work two years. Or 10 per cent. will be PAID for a LOAN of £7000, repayable in instalments in four years. Carriage to London easy; close to ship. Book will bear the strictest investigation. No royalty; low rental. None but principals need apply.

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A GENTLEMAN, with £2000 to £3000, may MEET with a GOOD COLLIERY PARTNERSHIP. One who can take charge of the office and management and sales preferred.

Address, JAMES COPE, Mining Engineer, Copeland street, Stoke-upon-Trent.

A GENTLEMAN, who has taken his highest degrees in School of Mines abroad, and who has since had several years of experience in Mining in England and other countries, of thorough competency both in underground and surface surveying, levelling, designing, good draughtsman, with a fair knowledge of analytical chemistry; speaking English, French, and German; wishes EMPLOYMENT in the capacity of a CIVIL and MINING ENGINEER to a company or to an engineer. First class references and testimonials.

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COAL WAGONS FOR SALE.—EIGHTY (8-ton), in good repair, now running on the Great Western Railway.

Address, "Wagon Company," care of C. Mitchell and Co., Advertising Agents, Red Lion-court, Fleet-street, London, E.C.

M R. JOHN SPRAGUE, late General Manager of the El Dorado Gold Mining Company, Nova Scotia, SEEKS similar EMPLOYMENT or INSPECTION in any healthy part of the world. First class references.

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B RITISH LEAD MINES.—Will shortly be published, price 1s. 6d.

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A Pamphlet on BRITISH LEAD MINES, together with the following MAPS, showing the position of the principal LEAD MINES, &c., &c., specially prepared by Mr. MURCHISON:—

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Notices to Correspondents.

COLLIERY MANAGERS' CERTIFICATES OF COMPETENCY.—"J. L." (Ashton Gate).—Four series of the papers set at examinations for Certificates of Competency were published in the Supplement to the Journal of Aug. 21. "J. L." will, of course, understand that fresh papers are set at each examination, and that the contents of these cannot be known to the candidate until the examination commences. The subsequent publication of the papers is intended merely to let candidates know the nature of the examination. A candidate can be examined in any district, and not alone in that in which he works.

LEAD AND BLEND ORES.—"J. F. K." (Great Tower-street).—All necessary information to the mines in Cornwall which produce lead and blend ores, and lead and blend ores combined, will be obtained from the official Mineral Statistics prepared by Mr. Robert Hunt, F.R.S., the Keeper of Mining Records at the Royal School of Mines. It is published annually by Messrs. Longman at 2s. 6d., and a new edition is nearly due.

BLEND AND LEAD ORES—"C. H. H." (Amlwch).—The letter has been forwarded as you desired.

JOINT STOCK COMPANIES LAW—"W. W." (Boston Spa).—No alteration has been made in Table A, but it is seldom adopted in its entirety (the Act permitting digression), and in many cases quite distinct Articles are adopted.

SHARE DEALING.—We never interfere in the sale or purchase of shares; neither do we recommend any particular mine for investment or speculation, or broker through whom business should be transacted. The addresses of most of the latter appear in our advertising columns.

ERRATUM.—In the article, in last week's Journal, on the Best Form of Pumping Engine, the fourth line of the third column of the page, "short" stroke should be "shut" stroke.

Received.—"T. W. C."—"M. R."—"J. R."—"J. H." (Geelong).—"Mineralogist."—We will publish the particulars, perhaps next week—"G. M."—"Stannum".—"H. N."—"Shareholder" (Wheaton-Grenville)—"J. F. M." (Virginia)—"J. P." (Paris)—"R. L."—"J. W." (Hayle). Next week—"Scrutator."

THE MINING JOURNAL, Railway and Commercial Gazette.

LONDON, NOVEMBER 6, 1875.

COLLIERY ACCIDENTS IN OCTOBER, AND THEIR LESSONS.

The mining districts have lately been suffering from a plethora of underground explosions, miscellaneous accidents, and fires. These all are due to a variety of causes, which are full of suggestions to the practical and scientific mind. The lessons they should teach may, perhaps, be brought home most effectively by a recapitulation of certain of the circumstances with which the accidents were surrounded, and this we now propose to do. By a gas explosion at the South Liberty Colliery, near Bristol, belonging to Ashton Vale Coal Company (Limited), four miners were killed and five others were injured. This district having always been regarded as free from gas naked lights were almost universally in vogue; and though at this particular colliery there had been slight emissions of gas, yet the ventilation was thought sufficient to preclude all danger. A few hours before the explosion the pit had been examined, and its condition reported perfectly safe. The gas is supposed to have escaped from a new roadway that was being made in the Toad vein, whose strata, as our readers know, are singularly irregular. The Coroner's jury found that the seat of the explosion was inadequately ventilated, but recorded a verdict of "Accidental Death." An accumulation of gas in No. 10 Old Park Pit of the Cannock Chase Colliery Company was fired, and two men were killed by the explosion, which was supposed to have occurred through a "blower" in the roof. As the roadway has been clear of all gases, and two miners had passed along it with naked lights a short time before the explosion, its cause was a mystery to the district Government Inspector, but no one was declared to be to blame. Sinking operations had been pushed as far as 42 fathoms at the Sunderland Bridge Colliery, near Durham, belonging to Mr. H. T. SALVIN, and a drift was being opened to draw away some water when a large accumulation of gas escaped, and instantly exploded, killing a sinker and dangerously injuring two others. The fatal explosion of gas in the Breach Colliery of the Volster Coal Company, Coleford, need not be particularised, for the facts must be fresh in the minds of our readers. Besides this list of explosions there have, unhappily, been numerous others, more or less significant in their character as they have been destructive in their issues.

Turning our attention to miscellaneous colliery accidents, we are immediately struck with the great number, that have resulted fatally to only one worker, and that he but too frequently had contributed to his own death. On this general subject, however, we say no more in this place. Perhaps the most singular fatality in the accidents now under classification was that at the No. 2 pit of the Allerton Colliery, belonging to the Morningside Coal Company, and situated about three miles from Wishaw. A pit was there being sunk to the Drumgray seam; the shaft had reached a depth of 240 ft., and the bottom was continuously several feet under water. Three men had been lowered 10 fms. from the surface by a horizontal engine, when it got out of gear, and the kettle, with the men, fell a distance of 180 ft. Two men were recovered alive, but the other was killed. From amongst the many other accidents we need only instance one as a general specimen, and in which blame was substantiated against the miner who was killed and two others. A manager of a stall at the Wollaton pits, near Nottingham, lighted a shot, but it missed fire, and went off as he was drilling it out. He had been repeatedly told not to re-drill the old hole, but was not informed by the underwriter that the shot had missed fire. Here was an unmistakeable violation of the colliery rules; the Government Inspector stated this, and the jury endorsed the statement in their verdict, and also recommended the punishment of the two living miners who had been negligent. Dealing next with the fires in mines, we give first position to the Andes Mine. Its ignition was announced by its evolving a column of flame 150 ft. high; it is now filled with gas, and will not, it is believed, be got into working condition for two months. This calamity throws no fewer than 5000 workpeople out of employment. The fire at the Blue Bell pits, near Old Hill, the property of Messrs. HINGLBY and Sons, broke out after the pits had been standing two days while the men had been attending local wakes; eight valuable horses were suffocated, and the shafts had to be covered in. Coal and refuse were deposited near a furnace drift in one of the pits of the Brynmally Colliery, Wrexham, and they became ignited. Attempts to extinguish the flames caused the severe scalding of three men, and the portion of the work where the fire occurred had to be made air-tight. Illustrative of a somewhat unusual cause of fire, we may cite that at a pit owned by the Stafford Iron and Coal Company, Fenton. It was due to the firing of a shot in a lately opened brassy-mine seam. To extinguish the fire the pit had to be deluged with water, which cannot be pumped out before some considerable time has elapsed.

We need not instance further disasters at coal mines to convince sensible colliery proprietors and mining engineers that much remains to be done before colliery fatalities have been minimised. It may be conceded that a large percentage of the deaths are attributable to recklessness on the part of the workers, and that suddenly developed atmospheric changes are liable to nearly altogether upset otherwise well-balanced calculations. But it would be well that our underground managers should recognise their prevalence to a much

larger extent than they usually do, and a rigid enforcement of the penalty imposed for every criminal dereliction of duty would go far towards reforming the carelessness of the miner. Against this strict observance of the law of responsibility the workman ought not to successfully appeal either to his union or to the general public. The more general diffusion of scientific knowledge amongst our mining engineers, supplemented in the matter of atmospheric changes as it now is by valuable storm warnings, should come to our aid in respect of what may be effected by employees of a higher grade. That their forecasts are valuable we venture to say the majority of our readers will willingly admit. As to the future, let the recent warnings be heeded, for the peculiar atmosphere of November always increases the dangers and difficulties evermore attending colliery ventilation. No colliery manager ever knowingly puts his men into unnecessary danger, and no sensible man ever objects to be reminded of the more than possibility of disasters ahead, against which a little timely forecasting and extra watchfulness may guard him. The month of October has been rife with individual instances of the need there still is of strict discipline, together with thoughtful apprehension of danger near. If the aggregate of deaths and losses had been accumulated in one accident a much louder warning would probably have been thereby sounded; but let us hope that the prominence which the *Mining Journal* has given here to these single accidents will contribute to put our engineers on their guard, and that the result will be a large decrease throughout this month upon the accidents which have happened in the last.

COAL-CUTTING MACHINERY.

The history of coal-cutting machinery shows that but scant encouragement has been given to those inventors who have not only given their time but have spent large sums of money in attempting to bring it to something approaching perfection. For various reasons colliery owners have shown no desire to make any changes with respect to the mode of raising coal in their pits, not wishing in some instances to come into collision with their men, who as might be expected have not looked favourably on the "iron-man." Amongst those who have laboured long and indefatigably in endeavouring to produce a machine that would rapidly and economically cut an ordinary seam of coal is Mr. FIRTH, of Leeds. Associated in the first instance with the late Mr. DONISTHORPE and Mr. RIDLEY, the three gentlemen so far back as 1861 obtained letters patent for improvements in machinery and apparatus for working coal and other mines. The machine, from time to time, has altered and greatly improved after the patents became the sole property of Mr. FIRTH, but without being of any great value to him until quite recently. But just as he was looking forward to getting back some of the large amount of money he had expended the patent lapsed, having been granted for fourteen years. Mr. FIRTH at once took the necessary steps for obtaining a prolongation of it, and the matter came on for hearing on Wednesday, before the Judicial Committee of the Privy Council. The evidence given by Mr. FIRTH fully bears out our remarks as to the little encouragement given to inventors by those it is proposed to benefit, for he states that the amount of royalties he has received up to the present time is only 500/. On the other side we find that since the patent was granted an expenditure has been incurred of between 19,000/- and 20,000/-, whilst the sales only amounted to about 2000/. Having seen the machine at work, and although, as was said at the hearing, it had been more an experimental one than otherwise, we certainly consider it a most valuable invention, for it does all that can be required of a coal-cutter. And put side by side with hand-labour, not only gets the coal far more rapidly, but in a more marketable state and at a much less cost. It is true that colliery owners have not availed themselves of the machines to any extent, but there is now every reason to believe that a demand for them will arise, especially in the case of new collieries, which can be so laid out, in the first instance, as to make them really valuable. That we are not going outside the bounds of probability we may state that within the last three years upwards of 150 new collieries have been commenced in Yorkshire alone, some of them estimated to produce daily from 1000 to 1500 tons of coal, and at some of the largest of them we have been informed by the owners that it is intended to introduce the best machinery for cutting and bringing down the coal. We trust, therefore, that there is a long and prosperous season before the makers of such machinery, and that they will be able to recoup themselves for the heavy outlays they have been compelled to make in perfecting their inventions. We have also to congratulate Mr. FIRTH on the fact that his patent has been prolonged for seven years, and hope that long before that period has expired he will have reaped the reward to which his indomitable perseverance entitles him.

THE GREAT STOPPAGE IN THE NORTH.

We rather wonder what the hon. member for Stafford—of whom we somehow seem to hear more now-a-days than of that kindred spirit Mr. HALLIDAY—will have to say upon the ominous suspension of all working operations by BOLCKOW, VAUGHAN, and Co. (Limited). We have arrived at such a stupendous pitch of grandeur, and civilisation, and "progress" in the iron trade that iron making cannot be carried on, somehow, at a profit; and hence ironmasters are fain to close their works. The experience of Messrs. BOLCKOW, VAUGHAN, and Co. is the experience of the Nant-y-Glo and Blaen Ironworks Co., the experience of the South Cleveland Ironworks Co., the experience of the Ebbw Vale Steel, Coal, and Iron Co., the experience of the Rhymney Iron Co., the experience of ever so many other "limiteds"—which have found to their cost that although they may be "limited," the demands of the working man are practically unlimited. Mr. MACDONALD has recently been on the stump in South Wales, and he has claimed all sorts of advantages for trades unionism. Trades Unions, he contends, have raised wages, improved the appliances existing for the ventilation and general protection of mines and workshops, and in every way ameliorated the condition of the iron worker and the miner. Now, we rejoice with Mr. MACDONALD that Parliament has taken in hand—and apparently with a certain measure of success—the important question of the regulation of mines and workshops, in the interest of the working man, and the still more important question of the improvement of the dwellings of the artisan class. Neither can we blame the working population for making an occasional stand in order to maintain wages at a reasonable level; but what we do protest against with all our force is the chronic discontent which Trades Unions and the delegate system foster. The delegates never leave the working man alone. They are always hunting up grievances for him; otherwise, of course, their craft would be in danger. Again, we object to the trades unionism of the period because it is rampant, uncontrollable, unreasoning, and unreasonable. The trades unionism of 1875 troubles itself very little about such commonplace matters as balance-sheets. If an employer can contrive to extract a little profit out of a year's work, so much the better; but if he can succeed in doing so—well, that is altogether his affair, and not the delegates' business. The motto of trades unionism is essentially "Let us eat and drink, for to-morrow we die." The trades unionist thinks only of the present, and heeds not the future. He does not stop to enquire whether he is killing the goose which lays the golden eggs; his business is to extract more and more wages—or, rather, higher and higher wages—from the unfortunate capitalist; and so long as this object is attained, the trades unionist does not concern himself very much about anything else. Another objection to trades unionism is that it arrogates to itself the functions of advocate, judge, and jury, all at once. Upon imperfect or incomplete information as to what is passing upon foreign markets, the trades unionism of the day dictates to employers the rate of wages which shall be paid and the number of hours' work which shall be given in exchange for the money paid. The result of the trades unionism of the last few trying years is that the capitalist who has embarked his resources in the manufacture of iron in Great Britain now finds himself unable to obtain even common interest for his money.

In view of intolerable obstacles and difficulties, BOLCKOW,

VAUGHAN, and Co. (Limited) have resolved to cut the Gordian knot in which they have become entangled, and to altogether close their works. The first sufferers by this decision will be the trades unions themselves. It is very unfortunate, but it cannot be helped. The position of the iron trade has become so trying that radical remedies will alone suffice. When the trade horizon has become a little clearer, and when the British ironworker is content to give his labour for a remuneration which will yield his employer a little interest upon his capital, then perhaps the cheerful hum of labour may again be heard in the workshops of BOLCKOW, VAUGHAN, and Co.

GOLD MINING IN VICTORIA, AUSTRALIA.—We have been favoured by the Secretary for Mines (Mr. R. Brough Smythe) with the gold mining statistics for the quarter ending June 30, which show that 41,879 miners were employed. Of these 16,338 Europeans and 11,270 Chinese were engaged in alluvial mining, and 14,120 Europeans and 153 Chinese in quartz mining. From information obtained from gold buyers and others by the mining surveyors and mining registrars, the total quantities of gold got from alluviums was 105,509 ozs., and from quartz reefs 152,132 ozs. The 224,196 tons of quartz crushed yielded 132,667 ozs. of gold, or at the rate of nearly 12 dwt. per ton; 10,704 tons yielding 2 dwt. 6·80 grs. per ton, or 1222 ozs. in all; and 16804 tons of pyrites and blanketing yielded 3921 1/2 ozs. of gold, or at the rate of 2 ozs. 6 dwt. 16 grs. to the ton. The appendix contains the continuation, with a beautifully executed lithograph, of Baron Von Mueller's description of new vegetable fossils of Victoria. The present part embraces descriptions of xylacaryon and xylacaryon lockii. He remarks that by the aid of this new disinterment of fossil fruits the remarkable fact seems established that the range of variability with reference to the size of these fruits, but not with regard to their structure, was much greater than is observed in cognate now living plants.

FROISETH'S MAP OF UTAH.—The new and revised edition for 1875 of Mr. B. A. M. FROISETH's pocket map of Utah has just been issued, and Messrs. Triibner and Co., of Ludgate-hill, have arranged to supply it in this country at 1/- per copy. The map is a great improvement upon that of 1871, and represents all the Government Surveys to date, also the location of 78 mining districts in Utah duly organised. During the present season there has been great activity in developing mines in nearly all of the prominent districts with the most encouraging results; there will in consequence be an increase in the yield of bullion as compared with last year of from \$4,000,000 to \$5,000,000, and if working capital were not so scarce as it is at present greater results could be attained. The map, like the former edition, is admirably printed, and vividly coloured, so that the location of any particular property in which the reader may be interested can be readily found. Mr. Froiseth has shown, very distinctly, the railroads completed, railroads proposed, roads made, county seats, cities, towns, and settlements, Indian reserves, county and mining district boundaries, proposed surveys, and, indeed, all other matters likely to be of interest to the practical miner and those whose capital is engaged in the working of the mines.

MINING IN CHILI.—The Cerro de Pasco silver mines, which formerly produced enormously, and which rank among the richest in the world, have of late years produced very poorly in consequence of the mines having filled with water to such an extent that they cannot be kept clear enough to allow their richer portions to be worked. Lately the Government has initiated a project for the excavation of a tunnel which would drain the whole of them, and the construction of which has long been talked of, but which has never been carried out, owing to personal jealousies or the want of funds. The tunnel, we believe, is estimated to cost nearly two millions of soles, and would certainly prove a most profitable undertaking. Mining appears to be taking a new start in the country, but nothing can be hoped for on a large scale unless intelligent practical miners from other parts are induced to go there, and foreign capital is found to carry on the works.

NOVELTY IN MINING.—An Australian correspondent informs us that the Great Britain Copper Mining Company (Limited) have offered to give a bonus of 500/- to any party of miners who will raise 500/- worth of marketable copper ore on the mine, the ore raised to be the property of the raisers. The directors will allow the use of their engine, and are prepared to make arrangements for carrying on the work.

GOLD.—An American contemporary gives the following:—Gold is valued at \$146 per cubic inch. At this rate a cubic foot of the precious metal, which contains 1728 cubic inches, will be worth about \$252,288. The entire quantity of gold now known to be in existence is valued at about \$3,000,000,000, so that if it were welded into one mass it could be contained in a cube the side of which would not measure over 23 feet.

COAL AND IRON IN THE UNITED STATES.—The production of anthracite coal in Pennsylvania to Oct. 2 this year was 14,619,564 tons, as compared with 14,978,180 tons in the corresponding period of 1874. The decrease of 358,616 tons indicated by these figures will probably, however, be recovered before the year has run its course, as the production is now proceeding on a very large scale. The production of bituminous coal in Pennsylvania to October 2 this year amounted to 2,933,057 tons, or 187,864 tons more than the corresponding production in the corresponding period of 1874. English rails have been quoted at New York at \$47 1/2 to \$50 gold per ton; American rails have made \$46 to \$50 currency per ton at the works. The Central Pacific Railroad Company and the Southern Pacific Railroad Company have determined to use steel rails exclusively in future upon their roads and branches. The sale is noticed of 400 tons of iron rails to the Peachbottom Railway Company at \$48 per ton currency.

GOLD IN WALES.—Considerable attention has lately been called to the fact of gold existing in Merioneth, and several very exhaustive letters on the subject have lately appeared in the Journal. The fact that gold existed in the quartz reefs traversing the country in the neighbourhood of Dolgelly has long been known; in fact, some go so far as to say the Romans were aware of its existence, and mined for it. Hitherto the many companies started to work the quartz have failed, in a great measure owing to the want of knowledge of the proper machinery. The district has lately been visited by experienced Australian gold miners; what their opinions of the prospects are may be gathered from the fact that most of the most promising sets have been secured. We believe we are not breaking confidence in saying that some extraordinary results have been obtained by alluvial washings; in one place the produce was 56 ozs. to the ton, and in many it was as high as 9 ozs. That these results were actually obtained we can vouch for, but whether the places selected were exceptionally good or not remains to be seen. We notice the Annual of the "Gentleman's Magazine" contains a tale founded entirely on gold mining in Merioneth; and there is no doubt that public attention will be directed to this part of the country, which may prove the California of England.

LIGHT LOCOMOTIVES FOR UNDERGROUND HAULAGE.—The question as to which is the best system of underground haulage is one which has not been, and from the very nature of the case never can be, finally settled, for the system which is best adapted to one case is entirely unsuited to another. The conditions which obtain in mines are exceedingly various, and each case must be considered in all its bearings before choice can be intelligently made. There is, however, little room to question the advantage of substituting mechanical for animal haulage in and about the mines wherever the distance is at all considerable. The progress made in America in the use of locomotives underground has been considerable during the last few years, and the New York "Engineering and Mining Journal" has now prepared an interesting table showing the work actually performed by some light locomotives manufactured by Messrs. Porter, Bell, and Co., of Pittsburgh. It appears that at the collieries of Messrs. Brooks and Son, of Newsonville, Ohio, where the grade is 220 ft. per mile, with curves of 40 ft. radius, 12-in. stroke, a similar engine at Haydenville, Ohio, hauls 57-ton train loads when the grade is 48 ft. per mile, and half-a-dozen others are working equally well elsewhere. As to the relative cost of hauling by locomotives, by fixed engines, and by cables or chains there is no reliable data, the question not yet having been investigated in a satisfactory manner; and, indeed, other conditions than the relative

most would probably decide in most cases the adoption of this or that system. The locomotive may be counted on to do the work of from six to 20 miles, according to the conditions under which it works—and in most cases it will be found economical where it can replace four miles. For underground haulage the chief objection to locomotives is the vitiation of the air by the products of combustion of the coal employed. In general the roadways on which the locomotive works require a special ventilation—that is, a separate split, by which the foul air is carried directly into the return air course. In the case of certain kinds of shale roofs the steam and heat from the locomotive are injurious, as they tend to disintegrate it, and they also greatly facilitate the decay of the mine timber. But as the special ventilation required to carry off the products of combustion is generally sufficient to carry off the steam and heat quickly, the injurious effects of these are greatly diminished. The light locomotive is an exceedingly convenient motor, and for tracks partly or altogether outside the mines the chief objection to it disappears; and if these advantages were more fully known and appreciated a very notable economy in the item of haulage would result at some of our mines and furnaces.

REPORT FROM CORNWALL.

Nov. 4.—The annual meeting of the Royal Cornwall Geological Society, held last Friday, at Penzance, was in attendance at any rate quite a revival of the old times, and there really seems ground also to believe that the Institution is entering upon a new period of activity and usefulness. It enjoys the advantage of a most practical president in Mr. Warington Smyth, F.R.S., and that gentleman made some specially valuable and interesting remarks upon deep mining. For the last three years, he said, a geological experiment on a bold scale had been carried on near Battle, in Sussex, the real object of which was not to dig gypsum—not to open a new supply of salt—not to discover coal in Sussex—but to find out what was below the Wealden, and thus contribute to solve a great practical problem for London and all the South of England. The deep exploration of the earth's crust was of more interest to them whose lot was mainly cast among the more ancient rocks. The silver-lead mines of Pzribam, in Bohemia, had been driven to the amazing perpendicular depth of 1000 metres, or 3280 ft. A vertical shaft, called Simon Lambert, in Gilly, near Charleroi, was 3493 ft. deep, while the depth of Dolcoath Mine was 322 fms. up to the adit. Adding 26 fms. from adit to the surface, the total was 352 fathoms. These depths, that looked like a mere scratch to the cosmogonist, whose eye was filled with the measurement of the radius of the globe, looked formidable enough to those who had to count the cost of all the operations connected with the sinking, and his chief reason for bringing the matter before them was to aid in commemorating a great mining fact, and to give confidence to those engaged in deep mining by advertising to the continuous and great prosperity of the deepest metalliferous mine in the world. It is very clear that we have not by any means exhausted yet the possibilities of our own deep mining. While Dolcoath looks up so well there is no reason why the lode should not be followed for another 100 fms. yet.

There was a lively discussion on the productive points of mineral lodes initiated by Mr. Williams, of Hayle, who holds the view that large sums of money might be saved by confining operations so far as possible to the productive points of lode junction and intersection, but it was conclusively pointed out that the exclusive adoption of this course would have caused some of the richest deposits to have been missed altogether, and that Mr. Williams was not quite so original in his ideas as he appeared to fancy, though there was certainly some reason why he should think so in the manner in which this branch of scientific mining has been neglected in practice.

The best mining paper was unquestionably that of Dr. Foster, on the remarkable tin deposit at East Wheal Lovell. The tin deposits at East Wheal Lovell occur in the form of pipes and bunches—pipe being merely a long narrow bunch. The most remarkable pipe is that which has extended from the 40 fm. level to the 110. It consists of a mass of rich tinny rock, in the form of an irregular cylinder, which the author considers an altered granite. The pipes and bunches are all traversed by a narrow vein of quartz. Dr. Le Neve Foster supposes that the original fissures of these veins descended into Nature's laboratory in the bosom of the earth, and brought up stanniferous and other emanations, either in the gaseous or liquid state, which attacked the granite walls, carried away some of the constituents, and deposited tinstone. The rich East Lovell deposits are thus merely the altered walls of a fissure in the granite. He explains the formation of pipes by supposing that the vapours or solutions were confined in their ascent to chimney-like gaps, which would be left if one side of an irregular fissure were shifted laterally. A tabular statement furnished to the author by Mr. Henry Rogers showed that from October, 1869, to June, 1871, a profit of 27,000£, was made on sales of tin amounting to 38,000£; in other words, the dividends declared amounted to more than 70 per cent. of the value of the tin sold. Well done, East Lovell.

"Because thou art virtuous shall there be no more cakes and ale," "Yes," would seem to be the opinion of the committee of East Pool, judging from their recent circular:

"The committee of East Pool beg to communicate to the shareholders at large that written representations have been recently made to them from several of the largest and influential holders in the mine, that the abolition of formal dinners at the account meetings would be desirable, and requested the serious consideration of the subject. In consequence, they have reflected closely on the question, and learning from due enquiry that great inconvenience and expense are incurred owing to the limited means possessed in the counting-house, and the largely increasing number of adventurers who now attend the meetings, they have, for these and other reasons, come to the conclusion that it will be very desirable in future to substitute for dinners the adoption of a lunch refreshment."

What can mining be coming to when East Pool, in the days of prosperity, drops its dinner? Verily the old days are departing indeed, and we can have no confidence in the stability of anything human. How many differences have been forgotten at mine dinners; how many breaches healed; how many desponding adventurers roused to fresh efforts. And these things are to be no more. There are several matters of mining practice that we could better afford to see a change in.

The following remarks, addressed to a contemporary, are very sensible:

"I saw some articles in your valuable paper some weeks since about the boring-machines, and the prizes offered by Mr. Basset for the best machine. I have also noticed the prizes offered to the best pair of miners for the greatest amount of work they could accomplish in a given time. All this is very good, but I think, with many others, that there is still something needed in order that success may attend the efforts thus far put forth, and that is that the machine should be put in charge of the engineer at the mine, and he should select men whom he thinks fit to take charge of the machine underground, and not the miner. Let the miner, I say, do his own work, and have nothing to do with the machine for the present. But the time will come when there will be found among the miners those who will be competent to take charge of the machine; but this is not the case at present, for, unfortunately, there is great prejudice in many of the mines against the machine, and we all know that prejudice hath neither eyes nor ears."

TRADE OF THE TYNE AND WEAR.

Nov. 3.—Continued dullness prevails here both in the coal, iron, and most other trades. There is a good demand at present for house and gas coal, but all other coals and coke are very dull, and the prices realised also very low. Now that the export season is closed the demand for steam coal is very limited, and the steam coal works in Northumberland are working from three to four days per week. Formal notice has been given by the Northumberland mineowners to the officials of the Miners' Union that they will ask for a reduction of 20 per cent. in the rates of coal hewers, and a reduction of 12½ per cent. in the wages of all other men employed in and about their collieries. This reduction to take place on Nov. 18. A special meeting of the Durham Coalowners' Association will take place on Friday, when the question of a reduction in Durham will be discussed, and there is little doubt that a large one will be demanded. As a rule the Durham coal mines are not paying their way at present, and many of the worst pits have been laid off, and this course will be adopted at others shortly.

Arrangements have been made to inaugurate the Jude and Hepburn memorials on Saturday. The proceedings will be of a very interesting character, and will include addresses from several contemporaries and personal friends of those two justly celebrated men, whose memory it has been determined to perpetuate. A public meeting is to be held in the morning at Heworth, after which the stone raised to the memory of Thos. Hepburn, in Heworth churchyard, will be uncovered, and after this ceremony a large portion of the company will proceed to Elswick Cemetery, when Martin Jude's monument will be formally unveiled. Mr. Thos. Burt, M.P., and most of the officials of the unions of the two counties have promised to take part in the proceedings, whilst the men of several Tyneside

collieries have volunteered to march in procession with bands and banners.

There is no improvement in the Pig-Iron Trade, although the general rates for raw iron have not been altered during the past week, and the manufactured iron trade is extremely bad; although the rates have been reduced to the lowest possible point it is found to be impossible to keep the mills going unless for stock. The news which arrived in Newcastle on Saturday, to the effect that the extensive rolling-mills of Bolckow and Vaughan, at Middlesborough, are to be stopped, caused great consternation, especially as it is feared that other large works in the district will follow the example.

There was a good attendance at Middlesborough market on Tuesday; and, notwithstanding the present and prospective depression, a fair enquiry for pig-metal, chiefly to complete shipments. There was a better feeling than might have been expected after the statement that Bolckow, Vaughan, and Co. were about to close their works. It seems that, for the present at all events, the best furnaces will not be stopped, though there is no doubt that these will largely have to follow if the finished ironworks remain inactive, and along with them pitmen and ironstone miners. Some of this class of workmen have been expecting their notices. Pits are closing in some parts of the county of Durham; and the coalowners, like those in Northumberland, who has just given notice of a reduction of 20 per cent., will shortly demand a reduction of wages. With regard to the condition of the Iron Market, it is necessarily very unsettled. Pig-iron is lower in price, though quotations are very irregular. No. 3 is on offer by merchants and "bars" at 4s. to 4s. 6d., but makers are asking 4s. to 4s. 6d. for the remainder of the year. Forge-iron is 4s. 6d. to 4s. at makers' works, but small lots are sold for less money by middlemen. The Cleveland Iron Stove Company, formed some time since, is likely to get into active work shortly, as they have bought 10 acres of land for their purposes. Finished iron keeps low. Rails are 6s. 12s. 6d. to 6s. 15s.; ship-plate, 7s. 10s.; puddled bars, 4s. 15s. 6d.; common bars, 7s. to 7s. 5s. Coal and coke ore in slack demand. Prices run very low.

NORTH OF ENGLAND INSTITUTE OF MINING AND MECHANICAL ENGINEERS.—A general meeting of members will be held on Saturday. Much interest attaches to the business to be brought before the meeting. A number of new members stand for election. A paper will be read by Prof. A. Freer Marrico, M.A., entitled "Some further notes on recent examinations of Coal Gases." The following papers by Mr. G. A. Lebour, F.G.S., will be discussed, "On the Little Limestone and its accompanying Coal in South Northumberland," and "On the Great and Four-fathom Limestones and their Associated beds in South Northumberland."

WALKER'S PATENT DETACHING HOOK.—The prevention of overwinding at collieries has now become so much a matter of certainty by means of Walker's detaching hook, that coroners' juries will no longer be justified in describing as "accidental" deaths caused by that preventable occasion of the destruction of miners' lives. Mr. James Wroe, managing partner in the firm of Rhodes, Wright, and Wroe, Park Farm Colliery, Liversedge, Heckmondwike, purchased a pair of Walker's patent detaching hooks in the spring of the present year. He writes on Friday last—"One of our enginemen forgot to shut off the steam at our winding-engine to-day at noon. The result was the overwinding of the cage with three persons. I am exceedingly glad to inform you that the detaching hook acted admirably, and to perfection, not only saving the lives of the three men, but also effecting a great saving in machinery as well. I cannot express to you how thankful I am at the result." And yet at this very time the Birmingham papers are reporting the occurrence of a later accident to that here prevented. "A number of miners were ascending the shaft in a cage," says one of these reports, "when, from some cause at present unexplained, the cage was drawn over the top wheel," and four men were killed! The cause at present unexplained, is the absence innumerable cases of a suitable apparatus; and, with Walker's invention before us, we cannot but think owners and managers undertake a serious responsibility to neglect its use.

For some time past a drilling apparatus has been in operation in one of the principal ironstone mines in Cleveland which promises to effect quite a revolution in this most laborious and expensive process. Results obtained over a period of nine or ten months show that the cost of "getting" the ironstone by mechanical means is less than one-half that of getting it by hand; and the gentlemen at whose mines the machine has been introduced are so satisfied with its superior efficiency and economy that they have now made arrangements for laying down a plant of 20 additional machines, to be worked by compressed air. It is a pity that the miners have offered some obstruction to the introduction of the machine. For this reason I am not permitted in the meantime to give more definite information concerning it; but from all that I have seen and heard, I am in a position to assure my readers that unless the miners as a body compel its abandonment—and this I would fain hope they would never venture to propose, seeing that its application is so unmistakably calculated to aid them in the most arduous part of their toil—the new drilling machine will ere long inaugurate quite a new era in the cost and other conditions of ironstone mining in Cleveland."—*"Elfin," in the Newcastle Daily Chronicle.*

REPORT FROM LANCASHIRE AND CHESHIRE.

Nov. 4.—The reductions which in my last report were anticipated with regard to prices of coal have come into effect with the beginning of the month, and seem likely to be maintained. The advance in West Lancashire has been at the rate of about 1s. per ton, though in some cases, and especially with regard to the superior qualities of house coal, the rise has been as much as 1s. 6d. and even 2s. per ton. The last rate has to a great extent been adopted by the smaller firms, and it is not unlikely that they may have to come down in price, and accept the same advance as has been adopted by the larger firms. Shipping continues very dull, and will not now improve until the spring trade sets in. Prices may be quoted at under (at the pit mouth): Best Arieley, 1s. to 1s. 6d.; Pemberton, 4s. 11s. to 12s.; ordinary house coal, 9s. to 10s.; slack, 6s. to 7s. Slack is exceedingly abundant, and the supply of coke is considerably above the demand.

The members of the South Lancashire and Cheshire Coal Association held their annual meeting at the Clarence Hotel, on Monday. There was a fair attendance. The retiring President, Mr. J. Booth, submitted a report, in which he reviewed the proceedings of the Association during the year, and detailed the operations of the committee appointed to deal with the question of the unsatisfactory state of the coal traffic, concerning which there were, as will be remembered, many serious complaints, especially at the time when the trade was exceedingly busy. Mr. W. Plirkington, of the St. Helens Collieries, was elected President for the ensuing year. At the close of the business proceedings the members dined together. Colliery villages, pure and simple, are not common in Lancashire, and in many parts of the mining district the houses accommodation for the workmen is of the most barren description. At Howe Bridge, Atherton, Messrs. Fletcher, Burrows, and Co., colliery proprietors, have recently created a small town. Over 200 cottages, for the use of colliers and other in the employ of the firm, have been erected, and this week a handsome village club-house has been opened. The total cost exceeds 2000£, and the institution is to be enrolled under the Friendly Societies Act. Beer, wines, and spirits are supplied. In another part of the township the firm have established a reading-room, and a new church is in course of erection by the Fletcher family.

The Iron Trade remains unaltered, and is in a very low condition. Ordinary bars, delivered in this district, are nominally quoted 7s. 17s. 6d. per ton, but there is much underselling.

Two deaths have occurred at one of the collieries of the Garswood Coal and Iron Company, through a miner having neglected to attend to the most ordinary precautions as to propping. The deceased, who was named Walsh, had been told to put up some props, but he delayed, and a fall of roof took place, killing instantly his grandson, who worked with him, and so injuring him that he died on Saturday last.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Nov. 4.—The business doing at the ironworks in Derbyshire has undergone no change of late, the works being kept well going in all directions. More activity has taken place with respect to house coal, and prices have improved. The miners have been working very well, a fact which contrasts favourably with many other districts, in some of which the men have received notice of a reduction of wages. Trade with London keeps up very well, and merchants are now getting from consumers 3s. per ton more than they did during the summer months. Steam coal continues in reasonable request, and a rather moderate demand prevails for engine fuel. Some progress has lately been made towards erecting a Memorial Hall to George Stephenson, at Chesterfield, where his remains now rest. An eligible site has been secured, but the subscriptions—which are under 5000£—are not what might have been expected. It is, however, hoped that a large additional sum will yet be received by those who have benefited by the works of the celebrated engineer. The proposed hall will have rooms for the Derbyshire Association of Mining and Mechanical Engineers, as well as for other local bodies.

Some little improvement has taken place in some of the Sheffield branches of trade, and which will, doubtless, continue to the close of the year. The mills engaged in heavy plates have been running as usual, and rather more is being done in light plates and rails. Bessemer is in better request, and at the branch works of Messrs. Cammell and Co., at Penistone, upwards of 1000 tons per week are being

made. Best qualities of table cutlery have become more active, and the foundries are busy. A considerable number of millmen are out, those at Parkgate not having resumed work. In the Barnsley district a good business is being done in manufactured iron, and engines and machinery for colliery purposes. The house Coal Trade is good, and an increased tonnage has been sent over the Great Northern to the metropolis of late, and colliery owners have been able to obtain a small advance in price. Steam qualities are declining, as the announcement that the Baltic ports are closed may be expected any day. Home requirements have undergone no alteration. The question as to the deficiency in the accounts of the Miners' Association, amounting to 4550£, is making some noise in the district, and on Tuesday evening there was a meeting at Mexborough on the subject, when a large number of men attended, but refused to hear any accusation as to the defalcations brought against the officials. The association of late has lost a considerable number of members, and the council appear to think that it is best to say no more about the matter, and to keep a better look-out for the future. The coal producing power of South Yorkshire is rapidly increasing, and in the course of another year in the Barnsley district alone the additional output promises to be at the rate of nearly 2,000,000 tons a year more than it is at the present time. One great advantage the new collieries will have is that they can be so laid out that the coal can be raised by machinery, and at one large place the necessary steps for so doing have already been taken by the owners.

AN UNFORTUNATE COMPANY.—Limited companies in the Sheffield district have fallen on evil times. The report of Messrs. G. and J. Brown and Co. (Limited), of Rotherham, shows that the company is in a deplorable condition. The company started three years ago with a capital of 125,000£, for the manufacture of iron and railway material. The vendors guaranteed a dividend of 10 per cent., but the concern has never paid, having lost 26,000£ of its capital, and even under new management sustained losses to the extent of 4000£ this year, as well as 12,000£ loss on a colliery which had been taken by the company. The directors, in issuing their report, have omitted the name of the Chairman (Mr. G. Brown) one of the vendors, who in a circular asks that judgment should be suspended until the annual meeting, when it is believed some startling disclosures will be made.

REPORT FROM THE FOREST OF DEAN.

Nov. 4.—The Coal Trade has slightly improved during the last few days, but the improvement has reference more especially to the eastern side of the Forest, and to work and output of material rather than change of price. Prices having continued almost *in statu quo* for a considerable period. The Flour Mill Colliery, which became flooded in consequence of the late heavy rains, is understood to be getting again in working condition, the pumps having done effective service in drawing off the surfeit or choke of water. A good find of coal is reported at the Brick Pit, belonging to the Forest of Dean Coal Mining Company, Moseley Green; the Brogill seam having been cut, is said to average over 4 ft. in thickness. This "find" of coal has not unnaturally raised the spirit of the adventurers, the directors considering that the prospects of the shareholders are decidedly encouraging. The Parkend Coal Company, for some special reason, is reported as having discharged some of its men, but which we conceive will only be temporary—until some necessary adjustment has been effected. Messrs. Morrison and Beauclerk, the enterprising purchasers of the Sedgley Furnaces and mining property connected therewith, have just registered themselves as a limited liability company, with a capital of 150,000£, in 10s. shares, but of course upon its formation merged as members of the firm. The principal subscribers are said to be—Robert McEwen, Manchester; T. Kirkwood, Bideford; J. H. W. Biggs, Liverpool; R. H. W. Biggs, Liverpool; H. F. A. C. Beauclerk, Newnham; and, of course, the vendors, who take a large number of fully paid-up shares and 1500£ in cash, payable within three months, bearing interest at the rate of 5 per cent. The mining property included in the purchase comprises Noroxon Park, King's Moor, Scilly Point, and Ingles Level Mines in Dean Forest, and it is understood that the company will aim at acquiring other mineral property in addition to the above, which undoubtedly may be obtained at reasonable cost without going beyond the Forest boundary.

We are pleased to note that the portion of line of the Severn and Wye Company, from Parkend to Coleford, is expected to be inspected by Col. Rich about the 15th inst., and if reported satisfactory, as is anticipated, it will be opened for passenger traffic not later than Dec. 1, which will be hailed as especially important to the town of Coleford, and to all others who may have occasion to visit that town, whether Foresters or outsiders. In reference to the difficulties which are reported as having cropped up in connection with the contractors for completing the Whimsey and Mitcheldean Road branch, we regret to add that the "hitch" has ended by a composition with their creditors of only a few shillings in the pound, so that the "fidgety" creditors, who were thought too fast at the time, were right after all. And although it may be too early to speak with much confidence, report says that the compounding contractors will, notwithstanding, go on with the line until the work is finished.

The Wingstone estate, between Newnham and Blakeney, consisting of a family residence and 35 acres (odd) of grounds and ornamental plantations, has been sold by auction, being purchased by Mr. Maule (of the firm of Wintle and Maule, solicitors, Newnham) for Mr. J. Badeley, the price being 5000£. The sanitary works for Cinderford, as far as sewage is concerned, "seems rather nearer the mark" than was expected by many, a meeting having decided last week to borrow 3900£ for the purpose of Government.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Nov. 4.—The South Staffordshire Iron Trade has shown increased strength in the course of prices this week, the rates for medium and common classes of finished iron being fully 5s. to 10s. per ton higher. Common iron is on the basis of 8s. to 8s. 5s. per ton for bars, and medium iron of the best known makes has advanced proportionately. Messrs. Dawes and Sons, of Bromford, whose iron is largely consumed in the district, have raised their quotations 5s. per ton all round. Branded iron is on the basis of 10s. for bars, the rate fixed by the leading firms at the Midsummer Quarterly Meeting. The increase in the rate for medium and common iron is, of course, due to the advance in the price of coal, which we announced last week, and which took effect from Nov. 1. The demand for finished iron is, with the exception of sheets, not of much importance. The pig-iron trade is quiet, but steady, and the smallness of stocks in the district, together with the increase cost of production, combine to render prices firmer. Common cinder pigs may be quoted 3s. to 3s. 5s. per ton, and best native all-mine pig 4s. 12s. per ton, the rates for intermediate qualities being in the usual proportion.

Considerable diversity of opinion prevails among the coalowners of South Staffordshire as to the prudence of the action taken last week with regard to prices. The Thick coal owners of Dudley and the house coal owners of Cannock Chase, who find a ready market outside the district, are contented enough with the decision, but coalmasters who work the thinner measures, and who are more dependent upon the local iron trade for their demand, regard the step as unwise, and likely to check business. Disapproval is also expressed in many quarters at the concession made to the colliers in wages without an extra hour being given up to increase the length of the working day. It is, however, too soon yet to pronounce an opinion as to the probable effect upon the trade of the course upon which the coalmasters have decided.

The following were included in to-day's quotations on the Birmingham Stock Exchange:—Sandwell Park Colliery, 3s.; Cannock and Huntington Colliery, 4 prem.; Chiltington Iron, 5s.; John Bagall and Sons, 6s.; Ivy House Colliery, 1 dis.; Spon Lane Colliery, par; Patent Shaft and Axle, 5 prem.; Willenhall Gas (5s. paid), 10, buyers; East Cannock Colliery, 7s. buyers; Hamstead Colliery, 1 prem., buyers; Mid-Cannock Colliery (10s. paid), 7

CORNWALL.

VALUABLE MINING SETTS, MACHINERY, AND PLANT,
IN THE PARISH OF CONSTANTINE, FOR SALE.

M. CORFIELD has been instructed to OFFER FOR SALE,
BY PUBLIC AUCTION, on the Mine, on Tuesday, 9th November next,
at Two o'clock in the afternoon, as a going concern (subject to such conditions as
will then be read), the WHOLE of the VALUABLE and EXTENSIVE
SETTS OF IRONSTONE, COPPER, TIN, AND
OTHER MINERALS.

Situate at Calamansack and Inow, in the parish of Constantine, in the county of
Cornwall, together with the WHOLE of the EXCELLENT PLANT and MA-
CHINERY thereon, comprising—
ONE valuable PORTABLE ENGINE, 18-horse power, by Barrows and Stewart,
with winding gear attached; engine house and stand, balance bob, box, &c.; cap-
stan sheaves, shaft tackle and sheaves; all the pitwork, rods, pumps, &c.; steel
wire rope, about 70 fms.; 70 fms. capstan chain, 40 fms. hemp rope, 70 fms. lads-
ders, cable whim and winch, one dozen wheelbarrows, windlasses, launders and
sheaves, saws and blocks, one dozen draw wagons, wheels, castings, stays, launder
collar dividings, &c.; bucket rods and bucket, agent's office, material and drying
house, pit saw, wood house, roof, doors and windows of smiths' shop, smiths'
bells, 32 in.; anvil, forge, screw tools, boring machine staples, rod, bolts, &c.;
loading planks, washing plate and floor, sawpit frame and smiths' tools, fire-brick,
miners' tools, &c., in a great variety.

The sets are held upon favourable terms, are large in area, and comprise rich
lodes of iron ore. They are most conveniently situated for import and export, being
within a quarter of a mile of an excellent shipping port.

The property is capable of considerable development, and from the proof of the
lodes of iron it seems to indicate, according to experienced miners, that these lodes
will turn to copper lodes in greater depth, and, if so, the value of this property
will be greatly enhanced.

For further information and to view, apply on the mine, to Capt. NOBLE; or to
the Auctioneer, at his office, Market Strand, Falmouth.

Dated Auction Offices, October 22nd, 1875.

NOTICE.

ST. IVES CONSOLS MINE, ST. IVES, CORNWALL.
NO SALE OF THIS MINE HAVING BEEN EFFECTED

AT the Auction held this day, the AUCTION was ADJOURNED until
WEDNESDAY, the 10th day of November next, for Two o'clock P.M. on the mine.

Dated 27th October, 1875.

ALEX. BERRYMAN, Auctioneer, &c.

TO BE SOLD (very cheap), a LARGE and VALUABLE
COLLIERY, in DEAN FOREST, containing THREE HUNDRED AND
FIFTY ACRES of the COLEFORD HIGH DELL SEAM OF COAL.

For further particulars, price, &c., apply to "Z. A." Post Office, Coleford,
Gloucestershire.

PINTOR PINDELLO COPPER AND FERRAL
LEAD MINES.

TO BE SOLD, BY AUCTION, in the Praça of Oliveira d'Azeméis,
in the kingdom of Portugal, on the 29th day of November next, in conse-
quence of the inability of the company to find sufficient capital for the further pro-
duction of the works, and under conditions to be then and there mentioned, all those
important MINES of PINTOR PINDELLO and FERRAL, situated near
the town of Oliveira d'Azeméis, together with the valuable WATER WHEELS,
PUMPING and other MACHINERY, PLANT, &c., recently put down, and in
good working order.

The Pintor Mine, now opened to a depth of 110 metres, presents a series of strong
copper pyrites lodes, all containing silver, whilst the Ferral Mine has two shafts
sunk to a depth of 40 metres, more or less.

The appearance of both mines warrants the belief that ultimately large returns
may be expected. Both mines are situated about eight miles from the Ovar Station
of the Northern of Portugal Railway, and connected by it with the Port of Oporto,
distant 20 miles.

Full particulars may be obtained from Mr. JOHNSON, Mining Engineer, Ferral,
Oliveira d'Azeméis, or at the offices of the company, 13, Pateo do Pimenta, Lisbon
Lisbon, September 28, 1875.

PHOSPHATE QUARRIES.

THE CONCESSIONNAIRE of 120 IMPORTANT and VALUABLE
PHOSPHATE QUARRIES, near BORDEAUX, is READY to TREAT
FOR THEIR SALE.

The quarries adjoining those now offered have been worked successfully for several
years by English firms, who ship the phosphate to the English markets.

For further particulars, &c., apply to MESSRS. GABRIEL, HUGON, and Co., 73,
Great Tower-street, London, E.C.

TO MINE AND QUARRY OWNERS.

FOR IMMEDIATE DISPOSAL, a QUANTITY of BENNETT'S
SINGLE TAPE and GUTTA PERCHA FUSE, in good condition. A
liberal discount will be allowed on the whole. The above is in tin-lined casks, so
suitable for export.

Address, "G. F.", 342, Messrs. Deacon's, Leadenhall-street, London, E.C.

COPPER MINE FOR SALE.

FOR SALE, a COPPER MINE, in FULL WORKING ORDER,
in one of the best districts in CORNWALL. Regular and profitable returns
are made. Water charges easy. Proprietors are prepared to treat for the entirety
or a part of the property.

Apply, in the first instance, to "A. B.," Post Office, Redruth, Cornwall.

THE HENDON SPELTER WORKS.

TO CAPITALISTS, PROMOTERS OF PUBLIC COMPANIES, & OTHERS.
FOR SALE, in consequence of the Death of the late Senior

Partner, John Candalish, M.P., the SPELTER WORKS, situate at Hendon,
in the borough of Sunderland, in the county of Durham, carried on under the
style of "THE HENDON SPELTER COMPANY."

The works are situated within one mile of the well-known docks of the port of
Sunderland, and adjoining the Hartlepool Branch of the North Eastern Railway,
with which they are connected by high and low level sidings, and thereby placed
in communication with all parts of the United Kingdom. Their position, within
easy distance of both the ports of Newcastle and Sunderland, is very advantageous
for the cheap importation of raw material, as also the forwarding of the manu-
factured article either by land or sea.

The ground on which the works are built can be either bought out or bought on
a yearly perpetual ground rent, and any quantity under 20 acres can be included
in the sale.

Being situated in the midst of the Durham Coal Field fuel of the best descrip-
tion can be obtained at a cost below almost any other part of the United Kingdom.
There are 19 workmen's cottages, which can be bought with the works.

The works contain 24 zinc furnaces, capable of producing 70 tons of metal a
week, as also calciners, potlofts, machinery, blacksmiths' and joiners' shops, &c.,
of sufficient capacity for a much larger number. The works can, therefore, be
doubled at a comparatively small cost.

The quality of the metal made at these works is well known, and it, therefore,
commands a ready sale at the highest prices.

Attached to the high level sidings are large depots for coal, ore, &c.

The goodwill would, of course, go with the works, and they will be sold subject
to all stock being taken at a fair market value.

The purchaser can also have the option of buying the CALCINING WORKS
and VALUABLE MINES in SPAIN, thus allowing of the economical and regular
supply of the raw material, and saving the mineowners' and merchants' profits.

As the ore from the South of Spain generally comes by ballast for ships laden
with sparto, it has been brought for this company at an average cost of 1s. per
ton, sometimes as low as 1s. 6d.

Further particulars can be had on application to the company.

CHINA CLAY AND TIN, COPPER, AND IRON ORES
IN CORNWALL.

THE LESSEE'S INTEREST in certain VALUABLE CHINA
CLAY AND TIN WORKS, in full operation, and also in certain CHINA
CLAY AND TIN, COPPER, AND IRON ORES SETTS in CORNWALL TO
BE DISPOSED OF.

Ful particulars can be obtained on application to Mr. S. N. SCOTT, China Clay
Merchant, St. Austell.

MINERALS TO BE LET.

TO BE LET, BY TENDER, ALL THE MINERALS ABOVE
AND INCLUDING the No. 3 RHONDDA SEAM, lying under the several
PARMS, called COED-Y-LAY, TYN-Y-COED, LLANLILID, TYLCHA WEN,
GELLY SEREN, and TON THRATHWYG, situate in the several parishes of
LLANLILID and LLANTRASSANT, in the ELVY VALLEY, GLAMORGANSHIRE,
containing together by admeasurement 587 acres, or thereabouts.

The property is most advantageously situated, being only distant 18 miles by
the present route from the port of Cardiff, with which this property is connected
by means of the Elv Valley Railway, running through the lands, and forming a
junction with the Great Western Railway at Llantrassant, thus affording direct
communication with all parts of the kingdom. The ports of Newport and Swan-
sea are also easy of access by means of the above-mentioned route.

The Llantrassant and Taff Vale Junction Railway, which is now opened, runs
within two miles of the property, and in conjunction with the Elv Valley Railway,
will greatly reduce the distance to Cardiff, and afford great facilities for the con-
veyance and shipment of the minerals to be worked from this property, which
contains the whole of the mineral seams in the South Wales basin underlying the
Elv Valley seam.

This mineral property, from its advantageous position, is the key to a very large
area of minerals lying to the rise of a level course, and, being the only practicable
outlet for such minerals, it will enable the same to be worked to greater advantage
than from any other quarter, by means of which a large income will be obtained
by the owners and lessees of this property in the shape of way leave to be paid by
the adjoining leases.

Ful particulars and terms of letting can be had on application to Mr. HERBERT
KIRKHOUSE, Mineral Engineer, Penyrueddu, Merthyr, Glamorganshire; MESSRS.
DAVIES, and Co., Solicitors, 14, Frederick's-place, Old Jewry, London; or
MESSRS. DAVIES and Co., Solicitors, Haverfordwest.

FOR SALE, BY PRIVATE CONTRACT, a 25 in. cylinder
ROTARY ENGINE, with a 10 ton BOILER, iron stamps axle 18 heads,
iron hoppers, &c., complete. These materials are nearly new, having only been
worked a very short time.

Apply to Mr. RICHARD CLOGG, Liskeard.—Dated 29th October, 1875.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACTS, 1862 and 1867, and
in the MATTER of the LAMBERT MINING COMPANY (LIMITED).—
By an Order made by His Honor, the Vice-Warden of the Stannaries in the said
Matter, dated the 27th day of October inst., on the Petition of the said Company,
IT WAS ORDERED that the said LAMBERT MINING COMPANY (LIMITED)
should be WOUND-UP by the Court under the provision of the Companies Act,
1862.

HODGE, HOCKIN, AND MARTRAC, Truro
(Petitioners' Solicitors).

Dated Truro, the 29th day of October, 1875.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACTS, 1862 and 1867, and
in the MATTER of the LAMBERT MINING COMPANY (LIMITED).—
The Vice Warden has, by an Order made in the above Matter, bearing date the
27th day of October last, APPOINTED JOHN HENRY HAMLEY, of Truro,
within the said Stannaries, an Officer of the said Court, to be absolutely the OFFICIAL
LIQUIDATOR of the above-named Company.

FREDERICK MARSHALL, Registrar.

Dated Registrar's Office, Truro, October 29, 1875.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACTS, 1862 and 1867, and
in the MATTER of the LAMBERT MINING COMPANY (LIMITED).—
Notice is hereby given, that ALL CREDITORS of the abovementioned company are
required on or before the 13th day of November next, to SEND in their NAMES
and ADDRESSES, and the AMOUNTS and PARTICULARS of their SEVERAL
CLAIMS, to JOHN HENRY HAMLEY, the Official Liquidator of the said com-
pany, at the Stannaries Court Office, in Truro, within the said Stannaries.

FREDERICK MARSHALL, Registrar.

Dated Registrar's Office, Truro, October 29, 1875.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACTS, 1862 and 1867, and
in the MATTER of the LAMBERT MINING COMPANY (LIMITED).—
Notice is hereby given, that ALL CREDITORS of the abovementioned company are
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CLAIMS, to JOHN HENRY HAMLEY, the Official Liquidator of the said com-
pany, at the Stannaries Court Office, in Truro, within the said Stannaries.

FREDERICK MARSHALL, Registrar.

Dated Registrar's Office, Truro, October 29, 1875.

In the High Court of Justice—Chancery Division.

IN THE MATTER OF THE COMPANIES ACT, 1862 AND 1867.

IN THE MATTER OF THE LIQUIRIA GOLD MINING COMPANY.

NO TICE IS HEREBY GIVEN, that the Vice-Chancellor, Sir
RICHARD MALINS, has fixed MONDAY, the 15th day of November, 1875,
at twelve o'clock at noon, at his Chambers, situate No. 3, Stone Buildings, Lin-
coln's Inn, in the county of Middlesex, as the time and place for the APPOINT-
MENT of an OFFICIAL LIQUIDATOR of the ABOVE-NAMED COMPANY.

E. W. WALKER, Chief Clerk.

VALLANCE AND VALLANCE, 20, Essex-street, Strand and Lombard
House, George-yard, Lombard-street (Petitioners' Solicitors).

Dated this 2nd day of November, 1875.

CRENVER AND WHEAL ABRAHAM UNITED MINES
COMPANY (LIMITED).

IN LIQUIDATION.

TO BE SOLD, BY AUCTION (by order of the Liquidators),
by Mr. W. J. JOHNS, on Tuesday, the 30th day of November, 1875, at
Two o'clock P.M., at the CRENVER AND WHEAL ABRAHAM MINES, in the
parish of Crowan, in the county of Cornwall, in One Lot, as a going concern, the
WHOLE of these valuable and very extensive MINES, together with the
MINING PLANT, MACHINERY, MATERIALS, AND EFFECTS,

Now being in and upon the said Mines, and comprising the following:—

STURT'S 90 in. cylinder CONDENSING ENGINE, with pitwork, boilers, &c.;
PERRY'S 20 in. cylinder CONDENSING ENGINE, with pitwork, boilers, &c.;
WILLIAMS' 70 in. cylinder CONDENSING ENGINE, with pitwork, boilers, &c.;
STURT'S 30 in. cylinder CONDENSING WHIM ENGINE, with boiler, &c.;
PERRY'S 30 in. cylinder CONDENSING WHIM ENGINE, with boiler, &c.;
WILLIAMS' 26 in. cylinder CONDENSING WHIM ENGINE, with boiler, &c.;
WOOLFS' 30 in. cylinder CONDENSING ENGINE, with boiler, &c.

Pneumatic stamp, compound engine, with boiler, batteries, &c., rods, connec-
tions, plunger lift, pulley stands, tackle, &c., at the various shafts, steam hammer,
screwing machine, self-acting fan, screw-acting table, drilling machine, circular
saws, and other machinery and materials.

The sets are held under the various lords at moderate rents and dues, and full
particulars of the same can be had on application.

Any further information can be obtained from ALFRED GOOD, Esq., the Joint
Liquidator, New Poultney Chambers, 7, Poultney, London; W. P. CARDZO, Esq.,
Camborne, Cornwall; from the Auctioneer; or from WILLUGHBY OAKES, Esq.,
Solicitor, 200, Piccadilly, London; or J. G. CHILCOTT, Esq., Solicitor, Truro,
Truro, November, 1875.

NEW DALE MINE (LIMITED).

IN LIQUIDATION.

IMPORTANT SALE OF VALUABLE MACHINERY AND MINING PLANT,
AT WARSLAW, NEAR LEEK, STAFFORDSHIRE.

MESSRS. FERGYSON AND SON have received peremptory
instructions from the Liquidator to SELL, BY AUCTION, at the New
Dale Mine, Warslow, near Leek, on Tuesday, the 16th inst., at One for Two o'clock
prompt, the following

COSTLY MACHINERY AND PLANT (without reserve):—

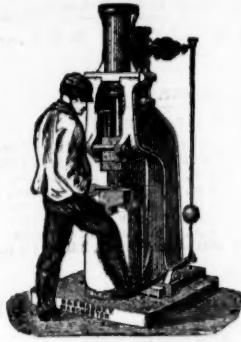
ONE 40 in. PUMPING ENGINE; ONE 19 in. WINDING ENGINE; ONE
12 in. STEAM CAPSTAN; ONE CRUSHER; 50 pumps, 15 in. diameter, weight
40 tons; 2 polo cases; 3 working barrels; 3 windholes; 4 door pieces; 2 H
pieces; 2 stuffing boxes and glands; 9 10 in. pumps; 10 in. H piece and door piece
windhole working barrel; 7 8 in. pumps; 9 in. matching; 10 lots rod plates; rod
pins; door pins; flange pins; 8 lots of staples and glands; 7 slack seats; 4 buckets;
2 in. rods; 3 sets of bevels and sundries.

The machinery is in first-class working order, and the materials of the best poss

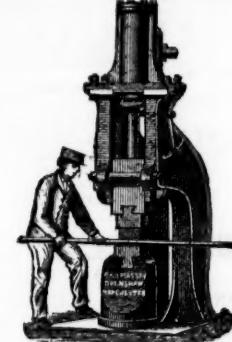
B. & S. MASSEY, OPENSHAW, MANCHESTER.

PRIZE MEDALS Awarded:—Paris, 1867; Havre, 1868; Highland Society, 1870; Liverpool, 1871; Moscow, 1872; Vienna, 1873; Scientific Industry Society, 1875
Leeds, 1875.

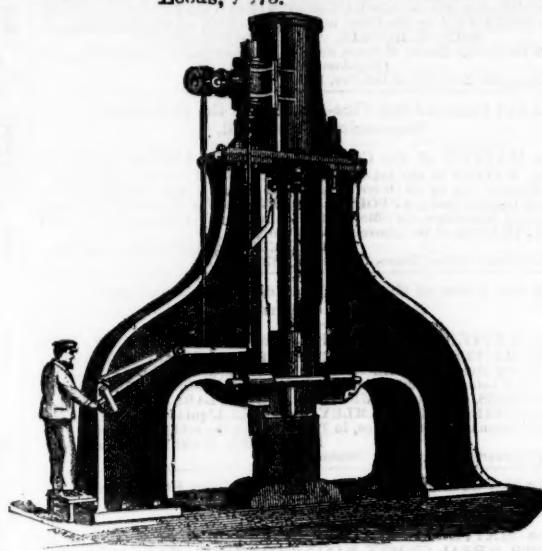
Patentees and Makers of Double and Single-acting STEAM HAMMERS of all sizes, from $\frac{1}{2}$ cwt. to 20 tons, with self-acting or hand motions, in either case giving a perfectly DEAD BLOW, while the former may be worked by hand when desired. Large Hammers, with Improved Framing, in Cast or Wrought Iron. Small Hammers, working up to 500 blows per minute, in some cases being worked by the Foot of the Smith, and not requiring any separate Driver.



Hammer with Foot Motion.



General Smithy Hammer.



Steam Hammer for Heavy Forging.

SPECIAL STEAM STAMPS, for Forging, Stamping, Punching, Bolt-making, &c.

STEAM HAMMERS for Engineers, Machinists, Ship-builders, Steel Tilters, Millwrights, Coppersmiths, Railway Carriage and Wagon Builders, Colliery Proprietors, Ship Smiths, Bolt Makers, Cutlers, File Makers, Spindle and Flyer Makers, Spade Makers, Locomotive and other Wheel Makers, &c.; also for Use in Repairing Smithies of Mills and Works of all kinds; for straightening Bars, bending Cranks, breaking Pig-iron, &c.



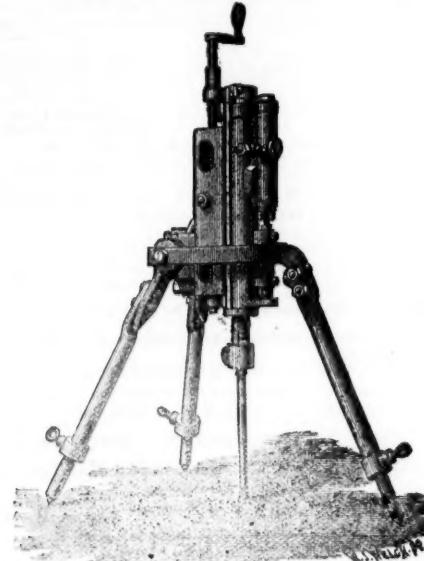
Special Steam Stamp.



General Smithy Hammer.

From 60 to 100 Steam Hammers and Steam Stamps may usually be seen in construction at the Works.

THE "CHAMPION" ROCK BORER.
For Tunnels, Mines, Quarries
AND OTHER WORKS.



The "CHAMPION" Rock Borer has been designed after years of experience of other Rock Drills; it surpasses them in their good qualities, and avoids their imperfections, and while being of the very best make and material, it is absolutely the cheapest in the market.

Intending purchasers can satisfy themselves of the excellence of this Rock Borer by seeing it in actual operation.

Improved Air-Compressors, &c.

ULLATHORNE & CO.,
METROPOLITAN BUILDINGS,
63, QUEEN VICTORIA STREET, LONDON, E.C.

Prize Medal—International Exhibition, 1862.



CHAPLIN'S PATENT
PORTABLE STEAM ENGINES
FOR PUMPING AND WINDING.
SPECIALLY ADAPTED FOR PITS, QUARRIES, &c.
SIMPLE and STRONG; require NO FOUNDATION
OR CHIMNEY STALK, and are
EASILY ERECTED or REMOVED.
Sizes, from 2 to 30-horse power.

Steam Cranes, 1½ to 30 tons, for railways, wharves, &c.; hoist, lower, and turn round in either direction by steam.

Stationary Engines, 1 to 30-horse power, with or without gearing.

Hoisting Engines, 2 to 30-horse power, with or without jib.

Contractors' Locomotives, 6 to 27-horse power.

Traction Engines, 6 to 27-horse power.

Ships' Engines, for winding, cooking, and distilling passed by H.M. Government for half water.

Steam Winches. Engines and Boilers for light screw and paddle steamers.

WIMSHURST, HOLICK, & CO.,
ENGINEERS.

CITY OFFICES: 34, WALBROOK, LONDON, E.C.
WORKS: REGENT'S CANAL DOCK, 602, COMMERCIAL ROAD EAST,
LONDON, E. (near Stepney Station.)

BOURNE'S PATENT BALANCED High-Pressure High-Speed Engines.

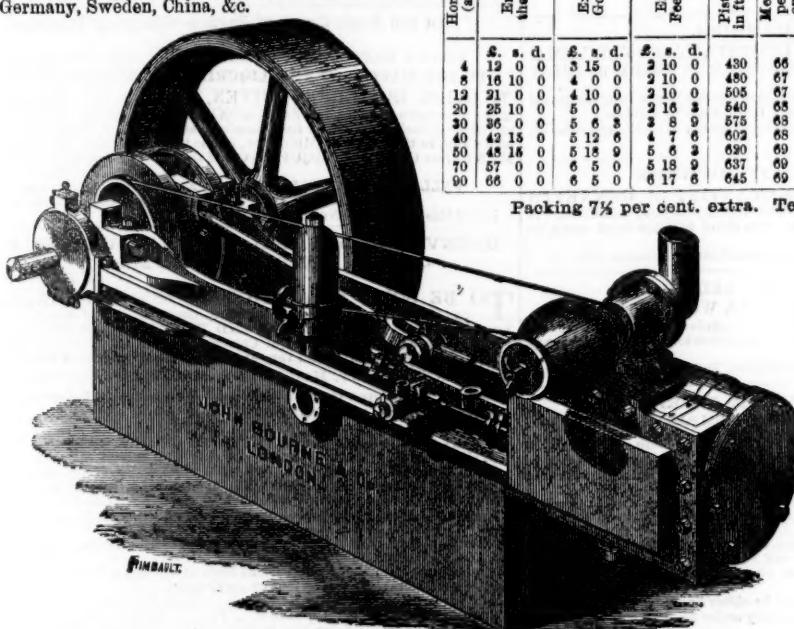
THE BEST AND CHEAPEST SMALL ENGINES MADE.

These engines have just been awarded a Silver Medal at the Manchester Exhibition, and about 1800 H.P. of them have been sold in a few months to North and South America, New Zealand, Australia, the Cape, Russia, Spain, Portugal, France, Germany, Sweden, China, &c.

PRICES.

Horse-power (actual).	£. s. d.	£. s. d.	£. s. d.	Extra for Governor.	Extra for Feed-Pump.	Piston speed in ft. per min.	Mean press. per sq. in. on piston.	£. s. d.	£. s. d.	Tubular Boiler.	Extra for Mounting.
4	12 0 0	3 15 0	2 10 0	430	66	27 17 0	10 10 0				
5	16 10 0	4 0 0	2 10 0	450	67	35 8 6	10 18 6				
12	21 0 0	4 10 0	2 10 0	505	67	40 2 0	11 18 0				
20	25 10 0	5 0 0	2 15 0	540	68	47 18 0	15 2 0				
30	36 0 0	5 6 8	2 8 9	575	68	57 19 4	15 13 0				
40	42 15 0	5 12 6	4 7 6	602	68	70 9 0	17 11 0				
50	48 0 0	5 18 9	5 6 2	620	69	84 4 0	18 2 0				
70	57 0 0	6 5 0	5 18 9	637	69	Two boilers,					
90	66 0 0	6 5 0	6 17 6	645	69	Two boilers.					

Packing 7½ per cent. extra. Terms, Cash.



From ANDREW LAMB, Esq., Superintending Engineer, P. and O. Steam Co.

Peninsular and Oriental Steam Navigation Company, Southampton, March, 1875.

I have carefully examined your Patented High-Pressure High-Speed Steam-Engine. Knowing as I do how many improvements in the steam-engine you have inaugurated during the last forty years, which have been silently adopted and are now in general use, it does not surprise me that you have again made a happy hit, and brought out an engine which exactly meets one of the most pressing wants of the day. The speed and pressure of your engine are greater than is usual in other engines; but with a due proportion of rubbing surface, nothing in the way of undue wear is to be apprehended from the speed, and boilers and engines can easily be made strong enough to bear almost any pressure with safety. The indicator diagrams are very good, and they show that though the engine is small it generates the power. Your invention of balancing the momentum of the moving parts, already adopted in the best engines for steam navigation, enables engines to be run at almost any speed without inconvenience, if well constructed in other respects; and in your present engine you have embodied the best engineering knowledge of the age, with the addition of several features of originality and importance. While, then, the disadvantages of your engine are *nil*, its advantages are great and manifest. A high pressure and high speed render possible large expansion, with a great saving both in coal and water. Then the motion is more equable than in common engines, and the weight of machinery and the space occupied by it are small. The most remarkable feature, however, is the wonderful reduction of first cost which your system permits; and people will now have engines who before thought them quite beyond their reach. Their production, as I understand, you have reduced to a manufacture. To sum up the whole in a few words, you have, in my opinion, brought out a machine long wanted, and likely to produce a revolution in that class of engine, as it can be adapted for almost any purpose.

ANDREW LAMB.
To John Bourne, Esq., C.E., Author of "A Treatise on the Steam-Engine," "A Catechism of the Steam-Engine," &c., &c.

Balanced Compounds for Pumping and Winding, for Mills, &c., equally moderate.

JOHN BOURNE AND CO., 66, Mark Lane, London.

N. HOLMAN AND SONS,
BRASS AND IRON FOUNDRIES AND ENGINE WORKS,
PENZANCE AND ST. JUST, CORNWALL,
Sole Makers of Stephens's Improved Patent Pulveriser,
FOR REDUCING TIN ROUGHS, LEAD SKIMPINGS, AND OTHER ORES.

The advantages possessed by these machines over others are—

- 1.—THE CHEAPNESS.
- 2.—THE SIMPLICITY OF CONSTRUCTION.
- 3.—THE DURABILITY OF THE WEARING PARTS.
- 4.—THE QUANTITY OF STUFF PULVERISED.

- 5.—THE PERFECT MANNER IN WHICH IT IS DONE.
- 6.—THE SMALL AMOUNT OF POWER REQUIRED TO DRIVE THEM.

MACHINES MADE SPECIALLY FOR EXPORTATION.

For prices, testimonials, and further particulars, apply to N. H. and Sons, Sole Makers, at the above address, or to our London Agent below.

N.B.—Any person or persons infringing on the patent or manufacture of these machines, or any part thereof, will be prosecuted under the Act.

Estimates given for all classes of Mining Machinery, &c., for home and foreign supply.

ORDERS PROMPTLY ATTENDED TO.

London Agent—Mr. J. COATES, 33, Frederick Street, Gray's Inn Road, London, W.C.

NOBEL'S DYNAMITE

Is the MOST ECONOMICAL and POWERFUL EXPLOSIVE for every kind of MINING and QUARRYING OPERATIONS; for blasting in hard or soft, wet or dry ROCKS; for clearing land of TREE ROOTS and BOULDER STONES; for rending massive BLOCKS of METAL; for SUBAQUEOUS and TORPEDO purposes; and for recovering or clearing away of WRECKS, &c.

ITS SAFETY is evidenced by the total ABSENCE OF ACCIDENTS in transit and storage; it is insensible to heavy shocks, its GIANT POWER being only fully developed when fired with a powerful percussion detonator, and hence its great safety.

As a SUBSTITUTE FOR GUNPOWDER its advantages are the GREAT SAVING OF LABOUR, rapidity and INCREASE OF WORK done, FEWER and smaller BORE-HOLES required, greater depth blasted, safety in use NO DANGER FROM TAMPING, absence of smoke, unaffected by damp, &c.

For information, apply to the—

BRITISH DYNAMITE COMPANY (LIMITED), GLASGOW;

OR AT THE

London Export Office, 85, GRACECHURCH STREET, LONDON, E.C.

HOME TRADE DISTRICT AGENCIES:—

HENRY KITCHIN and Co., 14, TENTER-STREET, Whitehaven.
F. H. EDWARDS, Fort House, Newcastle.
ROBERT MORRISON, Zetland Buildings, Middlesborough.
ALBERT RICKETTS, Dean-lane, Bedminster, Bristol.
LEIGH AND SILLIVAN, 16, Old Corn Exchange, Manchester.
GEORGE ROBERTS, East End Villa, Lower Barton-street, Gloucester.
J. H. BROWN and Co., 6, Albion-street, Leeds.
Capt. S. WILLIAMS, Albert-street, Camborne.
CROSS BROTHERS, 21, Working-street, Cardiff.
G. WILLIAMS and Son, Baker-street, Aberystwith.
WEBB and Co., Llanberis, Caernarvon.

W. LEAN, Claremont House, Holwell.
JOHNSON and Co., Tower street, Dudley.
JOHN AULT, Eastwood, Nottingham.
B. D. VIGARS, Knutton, Newcastle-under-Lyne.
TODHUNTER and ELLIOT, Market-place, Douglas, Isle of Man.
ARTHUR TUPMAN, 19, India-street, Edinburgh.
JOHN DONALD, 24, Belmont-street, Aberdeen.
WILLIAM WATSON, Main-street, Coatbridge.
ROBERT HAMILTON, Douglas-street, Dunfermline.
R. and J. CARSON, 8 and 10, Corn Market, Belfast.
JAMES PIKE, 179, Strand Road, Merrion, Dublin.
CHARLES H. ROBERTS, Mount Rivers, Carrigaline, Cork.
CLOHERY and SEMPLE, Merchants'-road, Galway.

THE DARLINGTON ROCK BORER.

No VALVE—BLOW obtained by the movement of the PISTON.

IN USE IN FRANCE, GERMANY, SPAIN, AND ELSEWHERE.

Rock Borers, Air Compressors, and Electric Blasting Apparatus.
Sole Agents and Manufacturers for France.—The Blanzy Mining Company,

WHERE BORERS MAY BE SEEN IN OPERATION.

For letter of introduction, particulars, &c., apply to—

JOHN DARLINGTON,

2, COLEMAN STREET BUILDINGS, MOORGATE STREET, LONDON.

MINING MACHINERY AND TOOLS.

THE TUCKINGMILL FOUNDRY COMPANY,
85, GRACECHURCH STREET, LONDON, E.C. WORKS: TUCKINGMILL.

MANUFACTURERS of every description of MINING MACHINERY, TOOLS, MILLWORK, PUMPING, WINDING, & STAMPING ENGINES.
SOLE MAKERS OF

BORLASE'S PATENT ORE-DRESSING MACHINES AND PULVERISERS.

PRICE LISTS CAN BE HAD ON APPLICATION, AND

SPECIAL QUOTATIONS WILL BE GIVEN UPON INDENTS AND SPECIFICATIONS.

TUCKINGMILL FOUNDRY AND ROSEWORTHY HAMMER MILLS.
TUCKINGMILL, CORNWALL, AND 85, GRACECHURCH STREET, LONDON, E.C.

ARTESIAN BORINGS,

For WATER SUPPLY to TOWNS, LAND IRRIGATION, and MINERAL EXPLORATIONS, may be executed of any diameter, from 6 in. to 36 in., and to any depth to 2000 ft.

Pistons & Air-pump Buckets fitted with Patent Elastic Metallic Packing
of which upwards of 8684 have been made to March, 1875.

MATHER AND PLATT,

MAKERS OF LARGE PUMPS AND PUMPING ENGINES.

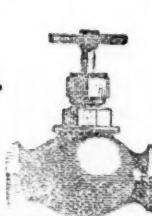
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THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares	Mines.	Paid.	Last Pr.	Clos. Pr.	Total divs.	Per share.	Last paid
1500 Alderley Edge, c, Cheshire*	10 0 0	—	—	12 6 8	0 5 0	Jan. 1875
11800 Balmynheer, t, Wenvron (4000 to ls.)	1 0 0	—	—	—	0 2 0	0 2 0	Nov. 1875
30000 Bamptide, c, i, mn., Devon*	1 0 0	—	1 1/2	1 1/2	0 2 0	0 2 0	June 1875
5500 Blaen Caerian, s-i, Cardigan* (24 sh.)	3 10 0	—	—	—	0 10 9	—	—
2000 Botallack, t, c, St. Just*	116 5 0	50	40 50	—	619 15 0	5 0 0	Aug. 1872
10000 Bronifoyd,* s-i, Cardigan	1 7 6	—	—	—	3 2 0	0 6 0	Jan. 1872
4000 Brookwood, c, Buckfastleigh	1 16 0	—	4	3 1/4	3 10 6	0 4 0	July 1875
8348 Cargill, s-i, Newlyn*	5 18 0	—	1	5/2 1	4 16 8	0 4 0	Oct. 1872
6400 Cashwell, t, Cumberland*	2 10 0	—	—	—	1 9 6	0 2 0	Aug. 1875
1000 Carn Brea, c, t, Illogan	35 0 0	—	55	50 52	308 0	0 1 0	Feb. 1874
6000 Carr, & Jane, t, Penrhynedneth	5 0 0	—	—	—	0 7 6	0 7 6	June 1875
2450 Crook's Kitchen, t, Illogan*	21 9 9	—	7 1/2	7 1/2	11 17 0	0 7 6	Jan. 1873
10240 Devon Gt. Consols, c, Tavistock*	1 0 0	—	3 1/2	4 4/2	116 10 0	0 12 0	May 1872
4290 Dolcoath, c, t, Camborne	10 14 10	47	44 46	—	107 6 8	0 10 0	Aug. 1875
6500 Drake Walls, t, c, Calstock	6 0 0	—	—	—	0 2 0	0 2 0	July 1874
10000 East Balleswiden, t, Sancroft*	1 0 0	—	1 1/2	1 1/2	0 2 11	0 5 0	Feb. 1874
6144 East Cardigan, c, St. Cleer	2 14 6	—	2 1/2	1 1/2	14 19 0	0 2 0	Oct. 1872
300 East Daiven, t, Cerdigshire	32 0 0	—	—	—	230 10 0	0 1 0	Sept. 1875
4400 East Pool, t, c, Illogan	0 9 9	—	15 1/2	15 16	13 18 2	0 4 6	Sept. 1875
1906 East Head Lovell, t, Wenvron*	5 19 0	—	7 8	7 8	20 7 6	0 7 6	Oct. 1874
2800 Fordslad, t, c, St. Just	25 0 0	—	—	—	81 18 0	0 10 0	Sept. 1875
40000 Glasgow Carav.** (30,000 £1 p.)	—	—	1 1/2	1 1/2	0 8 4	0 1 0	Sept. 1875
15000 Great Laxey, t, Isle of Man*	4 0 0	—	10 1/2	16 1/2	18 13 0	0 10 0	Oct. 1875
25000 Great Western, t, Cardigan*	2 0 0	—	—	—	0 2 0	0 1 0	Aug. 1874
5898 Great Wheal Vor, t, c, Helston*	41 2 6	—	2 1/2	3 1/2	15 19 6	0 2 6	June 1872
6400 Green Hurl, t, Durham*	6 0 0	—	—	—	1 12 0	0 4 0	Oct. 1874
20000 Grwynion, t, Cardigan	2 0 0	—	3	3 1/2	0 3 0	0 1 0	Aug. 1875
9880 Gunnislake (Glitters), t, c	5 5 0	—	2	1 1/2	0 8 9	0 1 6	Oct. 1875
1024 Herodsfoot, t, near Liskeard.	8 10 0	—	3 1/2	3 1/2	62 5 0	0 15 0	Oct. 1872
18000 Hindgat Down, c, Calstock*	2 5 0	—	1	5/2 1	4 3 0	0 5 0	Dec. 1872
25000 Hillace, t, Tipperary	1 0 0	—	—	—	0 8 11 1/2	0 6 0	Mar. 1875
402 Libshore, t, Cerdigshire	18 15 0	—	—	—	569 10 0	1 0 0	Sept. 1875
11000 Melindur Valley, t, Cerdigshire*	3 0 0	—	2 1/2	1 1/2	0 17 6	0 1 6	Jan. 1874
9000 Minera Mining Co., t, Wrexham*	5 5 0	—	7 1/2	8 7/5	64 1 2	0 2 0	Sept. 1875
20000 Mining Co. of Ireland, c, t, t, t	7 0 0	—	—	—	0 8 0	0 3 6	July 1872
12000 North Hendre, t, Wales	2 10 0	—	4	3 1/4	1 2 6	0 2 6	Nov. 1872
2000 North Levant, t, c, St. Just	12 2 0	—	2	1 1/2	1 2 6	0 2 6	Oct. 1873
27855 Old Treburgett, t, ordinary shares	1 0 0	—	—	—	0 0 0	0 0 0	Feb. 1874
9258 Old Treburgett, t, (10 per ct. pref.)	10 10 0	—	3 1/2	3 1/2	0 1 0	0 6 0	Feb. 1874
5630 Pedian-drea, t, Redruth	9 17 0	—	0	5 6	0 5 0	0 5 0	Nov. 1871
6000 Penhale, t, St. Agnes	3 0 0	—	2	1 1/2	3 13 8	0 6 0	July 1875
45783 Penfrothal, t, c, Gwennap	2 0 0	—	5/2	5/2	0 2 0	0 1 0	Nov. 1874
6000 Phoenix, t, c, Linkinhorne*	4 13 4	—	3 4	3 4	39 19 10	0 4 0	Nov. 1875
1772 Poldher, t, St. Agnes	15 0 0	—	—	—	1 12 6	0 5 0	Mar. 1872
18000 Prince Patrick, t, c, Holywell	1 0 0	—	3	2 1/2	4 13 0	0 12 0	Sept. 1873
1136 Providence, t, Lelant*	1 0 0	—	—	—	0 9 0	0 1 3	Oct. 1872
2000 Queens, t, Holywell*	16 16 7	—	3 1/2	2 1/2	104 12 6	0 10 0	Sept. 1872
12000 Roman Gravels, t, Salop	2 0 0	—	—	—	0 2 0	0 2 0	Sept. 1875
10000 Shelton, t, St. Austell	7 10 0	—	12 1/2	12 1/2	5 7 6	0 8 6	Sept. 1875
512 South Carnon, c, St. Cleer	1 0 0	—	—	—	0 1 0	0 1 0	Feb. 1872
6000 South Brea, t, St. Illogan	2 13 8	—	1 1/2	1 1/2	0 10 0	0 2 6	July 1872
1212 South Condurrow, t, Camborne*	6 5 6	—	6 1/2	5 1/2	1 12 6	0 5 0	Oct. 1872
6000 South Darragh, t, Cardiganshire	3 6 6	—	—	—	1 6 6	0 1 6	Nov. 1870
10000 St. Fr. Patrick, t, c, (800 sh. issued)	1 0 0	—	—	—	0 8 0	0 2 0	Apr. 1875
8711 St. Just Amalgamated, t*	3 10 0	—	—	—	0 9 0	0 4 0	Nov. 1871
12000 Tankerville, t, Salop	6 0 0	—	11	10 1/2	4 3 0	0 5 0	Nov. 1875
6000 Tincroft, t, Pool, Illogan	9 0 0	—	25	23 25	48 6	0 5 0	Aug. 1875
18000 Tretoll, t, Bodmin	2 0 0	—	—	—	0 1 0	0 1 0	Mar. 1874
4000 Trumpet Consols, t, Helston	7 10 0	—	3 1/2	3 1/2	9 11 0	0 10 0	Nov. 1872
15000 Van, t, Llanidloes*	4 5 0	—	30	28 29	15 18 6	0 14 0	Sept. 1875
12000 Tyllwyd, t, Cardigan	1 0 0	—	1 1/2	1 1/2	0 1 0	0 1 0	Nov. 1875
8000 W. Chilver, t, Perranzabuloe	12 10 0	—	17	17 18	52 17 6	0 7 6	Aug. 1875
9648 West Wheel Frances, t, Illogan	96 10 0	—	52 1/2	50 52	9 18 0	1 5 0	Oct. 1875
512 West Wheal, t, St. Austell	27 3 9	—	9 1/2	9 1/2	3 12 8	0 5 0	Oct. 1872
5048 Wheal Bassett, t, Illogan	5 2 6	—	10	8	638 10 0	1 10 0	Aug. 1872
2048 Wheal Jane, t, Kew	2 13 10	—	4	3 1/2	11 5 0	0 5 0	July 1875
4298 Wheal Kitty, t, St. Agnes	5 4 6	—	3 1/2	3 1/2	11 19 8	0 2 6	Dec. 1874
898 Wheal Margaret, t, U. N. Lelant*	15 17 6	—	3 1/2	3 1/2	82 2 3	0 10 0	May 1872
6000 Wheal Prussia, t, Redruth	96 5 0	—	160	160	622 10 0	4 0 0	Aug. 1872
12000 Wheal Russell, t, Tavistock	1 0 0	—	—	—	0 1 0	0 1 0	Dec. 1874
10000 Wheal Whisper, t, c, Warleggan	1 0 0	—	—	—	0 3 3	0 6 0	Nov. 1874
25000 Wicklow, t, c, t, t, Wicklow	2 10 0	—	—	—	0 1 6	0 6 0	May 1872
10000 Wye Valley, t, Montgomery*	3 0 0	—	4 1/2	4 5	0 6 0	0 3 0	Aug. 1875

FOREIGN DIVIDEND MINES.

Shares	Mines.	Paid.	Last Pr.	Clos. Pr.	Last Call.
55000 Alamillos, t, Spain*	2 0 0	—	1 1/2	1 1/2	1 9 9
30000 Almada and Trito Consol., s-i*	1 0 0	—	2 1/2	2 1/2	0 5 3
20000 Australian, c, South Australia*	7 7 6	—	2 1/2	2 1/2	0 2 0
10000 Battle Mountain*, c (6240 part pd.)	5 0 0	—	1 1/2	1 1/2	0 10 0
15000 Birdseye Creek, g, California*	4 0 0	—	1 1/2	1 1/2	0 14 0
6000 Bensberg, t, Germany	10 0 0	—	—	—	0 10 0
12320 Burr, Bur., c, So. Australia	5 0 0	—	—	—	0 10 0
20000 Copper Mining, t					